CRO He can maintain attitude by blowing whatever is coming out.

FLIGHT I read that but what was = he said he checked something. The third thing he said.

S/C 7 What are you reading for amperage on 2 Charlie, Carnarvon?

CRO He checked the ..... mode.

FLIGHT I got it. Forget it.

CRO We're showing 2 Charlie at roughly 2 amps here on the ground.

S/C 7 Okay. Looks like 1 does something.

FLIGHT Would you ask him specifically if he has tried the secondary attitude drivers.

CRO Say again, Flight.

FLIGHT Ask him if he's tried the secondary attitude drivers.

CRO Gemini 7, Carnarvon. Have you attempted the secondary attitude drivers?

S/C 7 Roger. We'll do that now.

CRO Roger.

S/C 7 I'm sure the driver ..... we picked all right but we'll try it.

FLIGHT Did you copy my message, Carnarvon?

S/C 7 Exactly the same as primary, Carnarvon.

CRO Roger, thank you Gemini 7.

Did you copy? Flight, he tried it and it's exactly the same.

CRO Gemini 7, would you place your DCS power circuit breaker to the ON position.

S/C 7 It's on.

CRO Roger. I'm going to start a couple of relays.

S/C 7 Okay.

FLIGHT Carnarvon, Houston flight.

CRO Go ahead, Flight.

FLIGHT Have him try turning the ACME inverter off and see if that helps that spike.

CRO Gemini 7, would you try turning the ACME inverter off and see if that helps that spiking.

S/C 7 We've already tried that. It'll just not work.

CRO Rog. Okay. I'd like to change your switch configuration for you, if you would.

I'd like you to go to, let's see, D-band adapter switch to COMMAND, C-band reentry switch to COMMAND.

S/C 7 Roger. D-band adapter and reentry are in COMMAND.

CRO Standby OFF.

S/C 7 Standby is OFF.

CRO TM switch to COMMAND.

S/C 7 TM is in COMMAND.

CRO Real-time transmitter circuit breaker ON.

S/C 7 Real-time TM ON.

CRO Real-time circuit breaker ON.

S/C 7 Say again, please.

CRO Real-time circuit breaker ON.

S/C 7 Real-time is on.

CRO Stand-by power circuit breaker ON.

S/C 7 Okay. They're on.

CRO Okay. Stand-by control circuit breaker ON.

S/C 7 It's on.

CRO ACQ AID beacon on.

S/C 7 ACQ AID beacon on.

CRO And C-beacon circuit breaker ON.

S/C 7 It's on.

CRO Roger.

FLIGHT We'd like to confirm that he has his fuel-cell control circuit breaker OPEN. No. 2, that is.

And we'd also like to see if the secondary ACME bias supply helps either one of his present problems.

CRO Gemini 7. Would you switch your fuel-cell control circuit breaker no. 2 to the open position.

What was that second thing, flight?

S/C 7 It is in the open position.

FLIGHT See if the secondary ACME bias supply helps either problem.

S/C 7 Roger. We'll see.

CRO Carnarvon has LOS at the present.

Flight, we'd had LOS.

FLIGHT Roger that.

HAW Seven, Hawaii Cap Com.

S/C 7 Go ahead, Hawaii.

HAW Okay, how're you doing?

S/C 7 Pretty good. We've at least put a spike in the main bus.

HAW Oh, go ahead.

S/C 7 We evidentally left the IR switch on and it was cycling through when we were looking for Six's reentry.

HAW Roger.

FLIGHT Tell him we had just asked him to turn that switch so he knows we were thinking, too, please.

S/C 7 Rog.

HAW Okay. They were right with you in Houston. That was the first thing I was going to ask, the rev switch to OFF.

S/C 7 Rog.

HAW Very good.

FLIGHT Tell him Major Brentnall came up with that. Get that Major!

HAW Yeah, your friend Major Brentnall came up with that one.

S/C 7 Yeah.

HAW Okay. We're showing you GO here on the ground.

S/C 7 Rog.

How - what're you reading now on 2 Charlie, Hawaii?

HAW Hang loose there a second.

What's your readout?

S/C 7 1 amp an m..... We're standing by to turn it off.

HAW Roger.

1 amp amp.

FLIGHT What do you show?

HAW We're getting it now.

FLIGHT Take it off and tell him we'll take a look at it again over the States.

HAW Roger. Take 2 - stack 2 Charlie off the line.

Did you copy that?

S/C 7 Yeah. 2 off the line. The only one we have going in the second section is 2B.

HAW Okay. Give me a readout on open voltage, stack 2 Charlie.

S/C 7 Reading 29 volts slowly rising.

HAW Roger.

Flight, Hawaii.

FLIGHT Go ahead.

HAW Okay. We're showing decimal niner 3 on stack 2 Charlie prior to taking it off the line.

FLIGHT Roger.

HAW And he's showing open voltage of 2 niner volts. Slowly rising.

FLIGHT 2 niner. Roger.

HAW Seven, would you leave that stack 2 Charlie off the line until further advice.

S/C 7 Roger. Leave it off till further advice.

FLIGHT How about asking him if he tried that secondary ACME bias supply.

HAW You want to know what happened?

FLIGHT Yeah.

HAW We'd like to know when you tried your secondary ACME bias, whether you did get any effects off that?

/C 7 No. It's the same as prime.

HAW Roger. Copy?

FLIGHT Affirmative.

HAW Ok.

S/C 7 We pushed them in individually and at nighttime we can see the firing but you're not getting half the impulse out of them that you get out of the others.

HAW Roger. If you can look down, how about taking a look and see if you can get - see my laser.

S/C 7 Okay. Just a minute.

HAW Okay. Look about 110 if you can spare yourself away. Flight, we're showing 2 Baker as 3 decimal 84 amps.

FLIGHT Roger, that.

AW You want another main, flight?

FLIGHT That's affirmative.

HAW Rog. Look 154 degrees. 154.

S/C 7 Roger. We're just getting sunrise now.

HAW Roger.

Flight, Hawaii.

FLIGHT Go ahead.

HAW I've got an MI coming out of my machine. Is that for me?

Flight plan update?

FLIGHT Negative.

HAW Okay.

FLIGHT You can tell 'em that spacecraft 6 is on the carrier deck.

And the pilots are now getting out.

HAW Roger. Okay. Your coharts no. 6 are on the carrier deck

and they're climbing out.

S/C 7 Very good.

HAW Looks like we're getting some pretty heavy cloud coverage, you

can knock off that laser bit now.

S/C 7 Okay. We had ours out but we can't see it.

HAW Roger. When you fire 3 and 4 individually you do get some

fluid out of 'em, do you?

S/C 7 Rog.

FLIGHT Can they give us an approximate time when this thing failed?

HAW I gave it to you my last rev post-pass, let me dig it out

again, flight.

The GMT was 14 53 30.

FLIGHT That's when they said it failed, right?

HAW That's affirm.

HAW These two thrusters, 3 and 4, are they on the colder side of the spacecraft?

S/C 7 Well, we've been just drifting so it's hard to say at random, we, I would think any part would be apt to be colder than the other.

HAW I was wondering when you were chasing 6 you were BEF, weren't you?

S/C 7 Right.

HAW Okay. Were these thrusters on the side away from the sun, do you know?

S/C 7 Stand by. ..... let the sunlight.

HAW Okay.

FLIGHT Ed, uh - - -

S/C 7 I expect right then it would have been on the warm side.

HAW You say it was on the warm side?

S/C 7 Roger. They're on the right-hand side of the spacecraft.

HAW Okay. Thank you.

Go ahead, flight.

FLIGHT It's interesting to note that we're at the same mmh conditions as we began to have troubles on spacecraft 5. I don't know whether that has any significance or not, yet, but - -

S/C 7 No, they would have been on the cold side when we went BEF.

HAW Okay. Very good.

Flight, not only that, your exact words for the same question, try the secondary attitude drivers with .....

S/C 7 We didn't notice until we tried to stop the drift that had built up during the night, this morning.

AW Roger. Understand.

We're showing they're off-scale load now, flight.

FLIGHT On what?

HAW On thruster temp.

FLIGHT Rog.

HAW ECS temp, that is.

FLIGHT Rog. We've noticed that.

HAW Section ..... hold on a second.

FLIGHT Yeah, we noticed that on your summary.

HAW Okay, that's TCA 3 right. This looks like the same problem again.

Do you want me to tell 'em about the propellant being the same as 5?

LIGHT No, let's hold that for a while. That's just for our consumption.

HAW Rog. We've lost telemetry and radar in Hawaii.

END OF TAPE

This is Gemini Control, Houston. 285 hours, 48 minutes into the flight of 7. Over, just north of, the Rose Knot Victor a few minutes ago, the 7 crew got the flight plan update. Here's how it sounded.

RKV Gemini 7, RKV here. ...(Garbled)...

S/C 7 Roger, RKV. ...(Garble)... Fuel cell purge is complete.

RKV Roger. Your next fuel cell purge will be over us on the next rev. That'll be rev 180.

HOUSTON RKV. Would you get us some open circuit voltages on Alpha, Bravo, and Charlie out of cell 2, please.

RKV Roger, Flight. Gemini 7, RKV.

S/C 7 Go ahead, RKV.

RKV Would you give us your open circuit voltages out of Section Two?

S/C 7 Roger. 2C is reading 31.2.

RKV Roger.

S/C 7 2B, open scale high, about 32.

RKV Roge.

S/C 7 And, 2A is reading 32 volts.

RKV Roger.

HOUSTON 32?

RKV That's 32 volts on 2A, Flight.

HOUSTON Roge. I copied the other 2.

RKV Roger.

HOUSTON Your communications just came up one order of magnitudes.

RKV Good show.

HOUSTON We'd like an LOS A, RKV.

RKV Roger. RKV has LOS.

END OF TAPE

This is Gemini Control Houston, 285 hours, 53 minutes into the flight of 7. From the WASP, we've just been advised that the crew, based on a preliminary look of the doctors, have been pronounced in excellent condition. Wally Schirra is presently on the tilt table getting his first postflight tilt. As soon as the two got down in the sick bay area, they each had a glass of iced tea. While Schirra is on the tilt table, Tom Stafford is getting an X-Ray, a first postflight X-Ray and some EKG readings are being made. Commenting on the overall flight, Schirra said quote, "It was ideal. We had no problems whatsoever." He also told a NASA public affairs officer there that he though he got some excellent film of the rendezvous sequence. This is Gemini Control Houston.

END OF TAPE

This is Gemini Control, Houston. 286 hours, 2 minutes into the flight. We have additional conversation via Tananarive. Here it is.

HOUSTON Gemini 7, Gemini 7, Houston.

S/C 7 This is Gemini 7. Go ahead.

HOUSTON Roger. Have you been able to observe the color of the fluid from thrusters 3 and 4 when it was not firing well? Gemini 7, Houston. Did you copy the question?

S/C 7 Well, as far as we know, it's just a flash of white. We can't see it very well.

HOUSTON Roger. Can you give me open circuit voltages on Section Two? Gemini 7, Houston. Could you give us a read out on Section Two voltages?

S/C 7 Roger. 2A is 32 volts. 2B is off scale high. 2C is 32 volts.

HOUSTON Understand. 2A, 32. 2B off scale high. 2C, 32.

S/C 7 Roger. Did you read that we have a Delta P light on Section One now, also?

HOUSTON Roger. Delta P light on Section One.

S/C 7 One and Two, both have Delta P lights.

HOUSTON Understand. Section One and Two, Delta P lights.

S/C 7 Roger.

HOUSTON Gemini 7, Houston. We want to leave the sections as they are. We will contact you at Carnarvon.

S/C 7 Thank you very much.

HOUSTON How's the tumbling?

S/C 7 It's not too bad now.

HOUSTON Roger.

END OF TAPE

This is Gemini Control Houston. A few minutes ago as 7 sailed over the north of Carnarvon, there was considerable discussion of the fuel cell situation. Here's how the conversation went.

CRO Gemini 7, Carnarvon.

S/C Roger, Carnarvon.

CRO Gemini 7, Carnarvon Cap Com.

S/C Go ahead, Carnarvon, Gemini 7.

CRO Roger. Could you give us another reading on the fuel cell No. 2 voltages open circuit.

S/C Roger. 2A is about 31.5, 32 that is. 2C is awfully hot. 2C is about 31.

CRO Roger. Thank you.

HOU We show that he doesn't have the circuit breaker open on those two chargers.

CRO OK. We're going to take another look at these volt, open circuit voltages over Hawaii, and then consider bringing the section back up on those stacks on this next pass.

HOU What are the firms on the Delta P light on section 1?

CRO They're still sinking.

FLIGHT We think that that is probably the same thing that happened the other night that we cleared

whatever was blocking the water on 2 Charlie and that it's doing the same thing on Bravo and clearing it. I mean on fuel cell No. 1.

CRO Rog. They feel that it is probably something blocking the water a little bit. And that it's just a matter of clearing it again.

S/C Roger.

FLIGHT Ask him if he thinks 2 Charlie has gone down since his reading over Tananarive?

CRO Do you think that 2 Charlie has gone down since your reading over Tananarive?

S/C It looks about the same, maybe a little bit less.

CRO Roger.

FLIGHT What do you show on CLO 1 and CL 10, that is the fuel cell water pressure and the drinking water pressure?

CRO Stand by one, Flight. 17.2 on drinking water and 17.2 on fuel cell water.

FLIGHT Say again. 17.2 on CLO 1.

CRO That's 17.2 on both, yes. CLO 1 and CL 10.

FLIGHT Roger.

CRO Are you getting a good main from us. We were having drop out just about the time we sent it.

FLIGHT Still haven't received your main. Send us another one. No, here it is. Just got it.

CRO OK, does it look OK?

FLIGHT Yep.

CRO OK.

FLIGHT Sending us an A summary?

CRO It's been sent. Two A's and one B.

FLIGHT Roger. Got it.

CRO And we're showing TCA 3 at 10.8 degrees.

FLIGHT Roger. We show 12 degrees on your summary.

CRO OK, and this was off right at the beginning so apparently it's come up a little.

FLIGHT Roger.

CRO Gemini 7, Carnarvon Cap Com. We're about to have LOS. We'll see you tomorrow.

S/C Roger. Adios.

CRO Roger.

FLIGHT Ask him if they've had any water to drink since they've had that fuel cell problem.

CRO Roger. Have you had any water to drink since that problem? I don't think they can copy, Flight. They went over the hill about that time.

END OF TAPE

This is Gemini Control Houston here, 286 hours 50 minutes, and we are in a swing coming across Guaymas. Elliot See has put in a call and here is the conversation as it occurs.

S/C 7 .... (garbled) but not bad.

Cap Com Roger. 7, did you call.

S/C 7 Negative.

Cap Com Give us section 2 open circuit voltages again.

S/C 7 Roger, 2 Alpha, 32, 2 Baker, off scale high, 2 Charlie, about 31.1.

Cap Com Roger.

S/C 7 This is Gemini 7 with a cabin temperature.

Cap Com Okay, before you give me that, would you put section 2 back on the line.

S/C 7 Roger, section 2 going back on the line.

Cap Com Okay, go ahead with the readouts, Frank.

S/C 7 Roger, cabin temperature 79, wall temperature 79, cabin dew point 62, temperature and dew point at the blue hose 65 and 52, temperature and dew point at the red hose 76 and 60.

Cap Com Roger, copy.

S/C 7 Houston, 7.

Cap Com Go ahead.

S/C 7 The amps on section 2 are about $\frac{1}{2}$ on 2A, 2B is about 3, and 2C is about $\frac{1}{2}$.

Cap Com Understand, 2A, 1 amp or was that $\frac{1}{2}$, and 2B is 3, and 2C is .5.

S/C 7 Roger, and so is to A, .5

Cap Com Roger.

Cap Com Might watch them for a minute here 7, and let us know if you see any change. We are watching them also.

S/C 7 Roger.

Cap Com It was a good try.

S/C 7 Any more ideas?

Cap Com We are working on it.

S/C 7 I'm worried about the line on section 1 here. What do you feel about that?

Cap Com You still have that on I see, we are working on it.

This is Gemini Control. A little later in this pass we will have a crew status report on the Command Pilot. It will come to us via RKV. Elliot See is talking again. Let's go back.

Cap Com .... are not ready with a solution on the thrusters yet. We would like to continue as we are, is the attitude control sufficient, or the lack of there.

S/C 7 We'll leave it alone.

Cap Com Okay.

S/C 7 You want us to leave it in this mode, right?

Cap Com That's affirmative, if it is adequate for you.

S/C 7 Okay.

Cap Com Okay, we are ready to turn off 2 Alpha and 2 Charlie at this time.

S/C 7 2 Alpha and 2 Charlie coming off the main bus.

Cap Com Gemini 7, Houston. Gemini 7, Houston.

This is Gemini Control. Apparently 7 is out of range of Antigua. It is directly over Panama. We are reading here the voltages, amperages on that fuel cell status. Our main bus voltage is 26.1 volts, squib 1 volts 26.2, squib number 2, 26.1, the control bus 25.7 volts and the stack

currents, these are amperage readings. In section 1, 1 Alpha is reading 4.3 amps, 1 Bravo is 4.6 amps, and 1 Charlie is 3.7 amps. In section 2, 2 Alpha reads .2 amps, 2 Bravo, 2.7 amps, and 2 Charlie is .1 amps. 2 Alpha and 2 Charlie have been turned off. They were turned off in this pass across the States. Now, in addition to a medical status report on Frank Borman over the Rose Knot Victor we also will have a fuel cell purge. However, those sections 2 Alpha and 2 Charlie will remain off. This is Gemini Control Houston.

END OF TAPE

HAW CAP COM Gemini 7, Hawaii cap com.

S/C 7 Go ahead, Gemini 7.

HAW CAP COM Roger, we'd like to have -- we show you go on the ground and we'd like to have an open circuit voltages on section 2.

S/C 7 Roger.
2 A's: 32 volts, 2 Bs are still high at 32, 2 C's read 31.1 volts.

HAW CAP COM Roger, copy. Would you check your TM control TM switch into Command position please?

S/C 7 TM to Command position

HAW CAP COM Roger, and I have a flight plan update for you if you're ready to copy.

S/C 7 Go ahead.

HAW CAP COM Roger, this is a cabin temperature measurement. It's a little bit different than what you normally do. So if you're ready to copy, I'll give it to you step by step.
Time 286 44 00 - cabin temperature test number one Step one - a cabin temperature; step two - wall temperature; step three - cabin dew point; step four - temperature and dew point at blue outlet; step five - temperature and dew point at red inlet. Do you copy?

S/C 7 Roger, we have it.

HAW CAP COM Roger, we'd also like to have your comments on day versus night thermal coupler...comfort

S/C 7 Say again.

HOU FLIGHT Day versus night thermal comfort c-o-m-f-o-r-t. That is.

HAW CAP COM That was day versus night thermal comfort.

S/C 7 Day versus night thermal comfort?

HAW CAP COM That's affirmative.

S/C 7 You can't tell much on a day until you get going around, when we close up at night in here and go to sleep, it's cooler.

HAW CAP COM Roger, understand. Also have the map update when you're ready to copy.

S/C 7 Go ahead.

HAW CAP COM Mode at 287 51 05, rev 180, 102.8 east, right ascension 07 53 10.

S/C 7 Roger, we have that.

HAW CAP COM We have nothing further for you, we're standing by.

S/C 7 Thank you.

END OF TAPE

RKV RKV has telemetry solid.

Gemini 7, RKV. We have your oral temp. You can start your blood pressure.

S/C 7 Roger, blood pressure coming down, RKV.

RKV We are standing by for your purge.

S/C 7 Roger, let me damp this rate down. We have two sections shut down.

RKV Cuff is full scale.

RKV That's affirmed, we want you to purge 2 Bravo.

S/C 7 Say again, RKV.

RKV Cuff is full scale.

RKV ..... (garbled) .. off the line.

S/C 7 The circuit .. (garbled)..

RKV All systems are go Flight. We've transmitted TX.

Flight Roger that. Flight Control, Flight Control, something happen there.

S/C 7 ... (garbled) in a mess.

RKV .... you have to know.

S/C 7 ..... (garbled) .....

RKV We have a valid blood pressure, 7. Would you give us your food, water, and sleep status.

S/C 7 Roger, we had, the Command Pilot and Pilot just finished day 13, meal B, this morning we had day 13 meal A, and the Command Pilot didn't eat the sausage. Total water to date for Command Pilot 972, total for column 5 is 31, column 6 is 6.

RKV Roger.

S/C 7 The Pilot's total water is 813, total column 5 is 30, column 6 is 7.

RKV Roger.

S/C 7 ... (garbled) we slept some last night, I guess about 5 hours We both feel we will be able to sleep pretty well when we get down.

RKV Roger. Surgeon out.

RKV Flight, RKV.

Flight Go ahead.

RKV Roger, the purge is going well. The crew reported that the rates vary from ½ to 1 degree, primarily roll.

Flight Roger, I understand. Delta P lights?

RKV Roger, we've got both of them.

Flight What sections has he purged?

RKV He's through with section 1, and he is now purging section 2. ... (garble) 2. His "ACME" is powered down at this time.

Flight Say again.

RKV His ACME is powered down at this time.

S/C 7 Purge complete, RKV.

RKV Roger.

Flight Send us -- Say again.

RKV The purge is complete, Flight.

Flight Send us a main now, please.

RKV Roger.

Flight Still have both delta P lights?

RKV That's affirmed.

Flight RKV, Flight.

RKV Go ahead Flight.

Flight Ask the crew if they see any objects at all in their vicinity.

RKV	Roger. Gemini 7, RKV.
S/C 7	Go ahead RKV.
RKV	Do you see any objects at all in your vicinity?
S/C 7	... (garbled) ... Wait, I'll check.
RKV	Say again.
S/C 7	I'll check. Just a minute.
RKV	Okay.
S/C 7	Negative. We see none.
RKV	Roger. Did you copy Flight.
Flight	Affirmative.
RKV	Have you got our .....(garble)
Flight	Affirmative. We would like another Main.
RKV	Roger.
S/C 7	Are we going to sleep tonight, RKV.
RKV	Same as always.
S/C 7	.... (garbled) ...
RKV	We'll take care of that.
S/C 7	Rog.

END OF TAPE

This is Gemini Control Houston at 287 hours, 44 minutes into the flight. About 20 minutes ago while over the Rose Knot Victor just before the start of a pass there we experienced voice failure on our voice circuits. Most of the east bound circuits were affected. These are wired through the Goddard Space Flight Center at Greenbelt, Maryland and the area affected apparently was in Lake City, Florida. That's the initial indication in any case. The power outage continued for about two minutes there. However, power was restored via emergency circuits and the lines have come back up and are operating, as they have been for nearly two weeks now. We did however miss that Rose Knot Victor conversation. We do have some conversation that occurred over Tananareve a very few minutes ago and here it is.

HOU	Tananareve go remote.
TAN	Tananareve remote.
	Tananareve has acquisition.
HOU CAP COM	Gemini 7, Gemini 7, Houston, how do you read?
	Gemini 7, Gemini 7, Houston, how do you read?
S/C 7	Loud and clear, Houston.
HOU CAP COM	Roger, how many Delta P lights do you have?
S/C 7	We still have two.
HOU CAP COM	You still have what?
S/C 7	Two.
HOU CAP COM	Understand, 2 Delta P lights.

S/C 7 There's one for each section Elliot.

HOU CAP COM Roger, I copy. Have the stack currents changed appreciably since RKV?

S/C 7 1A is 5, 1B 5, 1Charlie 4, 2 Bravo 3.5.

HOU CAP COM Roger, 7.

Gemini 7, we're going to put some HF on again if you're interested.

S/C 7 Thank you.

HOU CAP Com Gemini 7, if you read the HF is up.

Gemini 7, Houston, if you read the HF is up.

HOU Tananareve has LOS.

END OF TAPE

This is Gemini Control Houston. The Coastal Sentry Quebec raised Gemini 7 a few minutes ago for the first pass today, and here's how the conversation went.

CSQ — Gemini 7, CSQ.

S/C — Go ahead, CSQ.

CSQ — Roger. I'd like you to place your cryo read switch to the ECS O_2 position.

S/C — Rog.

FLIGHT — What is fuel cell No. 1 doing? How are the stack currents?

CSQ — One Alpha reads 3.86. One Bravo, 4.1. The main 11.5.

FLIGHT — Roger. Thank you.

CSQ — Go to the fuel cell O_2 position.

S/C — Got it. Do we have a good pass on the ...?

CSQ — Negative.

S/C — OK.

FLIGHT — That's in Hawaii, CSQ.

CSQ — Gemini 7, Chris said that is Hawaii.

S/C — Thank you.

CSQ — Would you go to the fuel cell H_2 position? Thank you.

S/C — All right.

FLIGHT — We'd like another main, please.

CSQ Roger, Flight. It's on its way.

Gemini 7, you can put your cryo read switch to the off position now. Did you hear what I said? You can put your cryo switch to the off position.

S/C Roger.

CSQ We have you go on the ground, Gemini 7.

S/C Rog. Can you give some indication of what Flight thinks about the Delta P light on section 1 switch?

CSQ Stand by.

S/C Stand by, CSQ. It just went out.

CSQ Roger. We copy.

S/C Read me?

CSQ That's affirmative.

FLIGHT Do you read the same thing?

CSQ That's affirmative, Flight.

FLIGHT Tell him the predictions were on the ground that that's what it would do.

CSQ Gemini 7, the ground predictions were that that light would go out.

S/C Say again.

CSQ The ground predictions were that that light would go out about this time.

S/C Very good.

FLIGHT Tell them that the ground was predicting it

would go out about 20 minutes ago.

CSQ Gemini 7, the ground predictions were that that light should have gone out about 20 minutes ago.

S/C OK, thank you.

FLIGHT Send us another main, please.

CSQ Roger, Flight. CSQ has LOS.

FLIGHT Roger.

END OF TAPE

This is Gemini Control Houston, 268 hours, 23 minutes of the flight. That thruster problem which has been the subject of so many conversations the last several hours got more discussion over Hawaii. And here it is.

HAW CAP COM — Gemini 7, Hawaii Cap Com. Gemini 7, Hawaii Cap Com, we have a good oral temperature standing by for your blood pressure.

S/C 7 — Coming down.

HAW SURGEON — Your cuff is full scale.

HAW CAP COM — Gemini 7, Hawaii Cap Com, I got a TCA test for you to copy.

S/C 7 — Roger, stand by one minute.

HAW SURGEON — We have a good blood pressure standing by for your exercise.

S/C 7 — Okay go ahead, please.

HAW CAP COM — Roger, this is a TCA Number 3 test. The temperature problem should have been cleared up at 15 degrees and we're now reading 22 degrees. So we'd like you to do this procedure over Hawaii. So we can monitor on the ground. We don't think it's a temperature problem but we want to try it anyway.

S/C 7 — Ready to copy.

HAW CAP COM — Want you to bring up the 3 range gyros. TCA number 3

circuit breaker on. Gemini 7 would you do this as I read it to you.

S/C 7 Roger, do it as you read it, okay.

HAW CAP COM Bring up your 3 range gyros.

S/C 7 They're up.

HAW CAP COM TCA number 3 circuit breaker on.

S/C 7 It's on. Go ahead it's on.

HAW CAP COM Direct control and give us a burst.

S/C 7 The only one you want on is 3. Do you want all the others off?

HAW CAP COM Bring up all 3 range gyros.

S/C 7 I mean circuit breakers, do you want all the circuit breakers turned off but 3.

HOU FLIGHT No, just tell him to give you a burst at right yaw.

HAW CAP COM Just give us a burst at right yaw.

HAW SURGEON We have a good blood pressure. Do you have any additions on your food, water, and sleep report?

HAW Roger, Gemini 7, did you get a thrust.

S/C In what mode do you want me to give you a burst?

HAWAII CAP COM Direct.

S/C Here we go. We get nothing. Other than the solenoid clanking. (garble)....

HAW CAP COM Say again 7.

S/C It looks like it's coming through the thruster without igniting.

HOU FLIGHT Tell him to turn it off.

HAW CAP COM Okay. Disregard we'll stop the test at this time. Turn your TCA number 3 circuit breaker/off.

S/C It's off.

HAW CAP COM And your 3 range gyros off.

S/C You don't want to try number 4, huh?

HAW CAP COM .....(garble) flight?

HOU FLIGHT Negative.

HAW CAP COM Negative 7.

S/C Okay, they're off.

HOU FLIGHT Tell him that my best guess is those are the thrusters that he's used -- they got continuous use and that we've probably got some trouble in the valve seats.

HAW CAP COM Roger. To the best guess these are the thrusters that you've used and we probably have trouble in the valve seats.

S/C Roger.

HAW CAP COM And I have a flight plan update when you're ready to copy.

S/C Stand by. Go ahead.

HAW CAP COM Roger. Title D-4/D-7 at 288 24 28, sequence 427, mode 02, remarks yaw 33 degrees right, pitch 47 degrees down, passing north to south in front of and below spacecraft.

S/C I don't know how you did it but I have pitch control.

HOU FLIGHT Tell him we're aware of that.

HAW CAP COM We're aware of that.

S/C Roger. Hawaii, this is Gemini 7.

HAW CAP COM Roger this is Hawaii.

S/C Do they mind if we turn on the thrusters now and see if we can get any kind of control out of them at all?

HOU FLIGHT We don't mind but we don't quite see the reason or the good that it's going to do him.

HAW CAP COM Flight advises it's allright with them but they don't see the reason or what good it will do you.

S/C Well, I may be able to do D-4/D-7, I don't know why they send up updates if they don't want us to do them.

HOU FLIGHT	We just wanted him to know what was there.
HAW CAP COM	Just wanted you to know what was there 7.
S/C	Okay, thank you. We're confined to drifting.
HAW CAP COM	Say again.
S/C	I said, "we're confined to drifting."
HOU	Hawaii is TM LOS.
HOU Flight	Roger.

END OF TAPE

This is Gemini Control Houston at 288 hours 35 minutes. The fuel cells are drawing most of the attention now, they have been the primary subject of discussion during this sweep down the West Coast of Mexico and Frank Borman got Chris Kraft's assurance that we wouldn't go by that dash one area tomorrow morning - - that Western Atlantic landing area unless he was completely satisfied in air - in space and here on the ground as to the operation of the cell, section 2 is - 2 of the 3 stacks have been turned off and here is the conversation regarding the total status of the power supply.

Cap Com — Gemini 7, Houston.

Gemini 7, Houston.

Gemini 7, I think we lost you for a minute there. Have you been trying to control the rates at all, or just letting them build up.

S/C — No, I've been letting them build up now since you said you wanted these turned loose and not used.

Cap Com — Roger.

Guaymas — AFD Guaymas.

S/C — You can control them with the other thrusters.

Cap Com — Roger. Why don't you go ahead and control them as best you can with the other thrusters.

Flight — Go ahead Guaymas.

S/C — Okay, ... (garbled) .... used at all, is that correct?

Cap Com — Roger.

Guaymas — We have CB03 on.

Flight — Rog.

Cap Com — Roger, we perfer they not be used.

S/C — Okay.

Cap Com — Gemini 7, did you get Delta P number 1 back.

_/C — Negative. Not yet, but we are expecting them.

Cap Com — Ah, come on now.

S/C — Roger, I could guess. We have it back.

Cap Com — You say you do have it back?

S/C — That's roger, it's back on.

Cap Com — Roger. Are you able to control your attitude rates or have you tried yet.

S/C — I'm stopping them now.

Cap Com — Roger. Are you going to give us a flight plan report here?

S/C — Yes, but about all I have is a film report really.

Cap Com — Okay, let's have it.

S/C — We have left 76 frames of S0217, 57 frames of S0217 with a ASA of 500. 47 high contrast black and white, 20 frames of dim-light, 13 frames of color shifted IR, 2 magazines of 16-mm. The only thing we have been able to accomplish today is the S-5 over South Africa.

Cap Com — Roger, and have you got vision tester scores.

S/C — We are going to do that right now.

Cap Com — Roger. Gemini 7, we'd like to have you consider the possibility of controlling yaw with the maneuver thrusters, that is, 13 and 14. Actually, 14 would be probably the one you would use.

S/C — Well, we'll give it a try.

Cap Com — We'd like you to consider it. It would be 11 and 12 that you would use, that is, your forward firing.

S/C — Roger.

Flight — Frank, what do you think about doing that.

S/C Well, Chris, I think we can control the rates all right, but I'm more concerned about the Delta P light than I am the rates.

Flight Yes, so are we, Frank.

S/C It looks to me like this time it means it.

Flight Looks like what?

S/C Looks to me like this time the cells are really on their way. The maneuver thrusters work pretty well in yaw.

Cap Com Okay.

Flight Why are you more concerned about the Delta P 1 light this time. Do you see something different about it.

S/C This is the first time it has reoccurred like this, the other times it has gone out. Same way with the two stacks this morning. We could almost tell up here that those two stacks had had it before we kept playing with them.

Flight Frank, the people down here are still fairly confident in section 1.

S/C Okay, good.

Flight We're watching it Frank, we will be recognizing it just as quick as you will.

S/C Okay. I'd like to make a go - we prefer to land somewhere near the carrier. You know what I mean.

Flight Frank, you know I would to.

S/C Okay.

Cap Com Would you tell us which magazines, camera magazines were used during the rendezvous and booster station keeping?

S/C We used almost all of the Elliot.

Cap Com Roger.

Flight Frank, let me put that differently to you. I'm going to be as certain that that fuel cell is going to last when we go by dash 1 area tomorrow morning as we absolutely can and I won't make that decision unless I am sure of it.

S/C Very good. We're on .... (garbled). ..

Flight Roger that.

Guaymas Guaymas has LOS.

END OF TAPE

FLIGHT RKV, Houston Flight. RKV, Houston Flight.

RKV Go ahead, Flight

FLIGHT We'd like to have you turn off all maneuver circuit breakers except 12 aft on.

RKV Roger.

FLIGHT And all attitude circuit breakers on except 3 and 4 yaw right off.

RKV Say the last again.

FLIGHT All attitude circuit breakers on except 3 and 4 yaw right off.

RKV Roger.

FLIGHT And then have him see how well he can control attitudes while over your site.

RKV Roger.

FLIGHT We also gave him a call about maneuver heaters. Let's make sure he's got those on, please.

RKV Want the maneuver heaters on?

FLIGHT That's affirmative. That's the first thing.

RKV OK.

FLIGHT We gave him an HF call on that, RKV.

RKV Roger. Now we have telemetry solid. All systems go. We have both Delta P lights.

FLIGHT Roger. Understand both Delta P lights.

RKV Gemini 7, RKV.

S/C Go ahead, RKV.

RKV Roger. Would you turn your maneuver heaters on, please.

S/C Attitude circuit breakers on.

RKV Roger. We have a little test to run. We want you to turn on all the maneuver circuit breakers except 12 aft. We'd like that off.

S/C Roger.

RKV Did you copy that, 7?

S/C Roger.

RKV OK. Turn all of your attitude circuit breakers on.

S/C All the attitude circuit breakers on?

RKV Except 3 and 4 yaw right. They should be off.

S/C Right. Roger.

RKV OK. We'd like to see how well you can control your attitude.

S/C Looks fine, RKV.

RKV Roger. Do you copy, Flight?

FLIGHT What did he say, RKV?

RKV He said it works fine.

FLIGHT How did the rates look on the ground?

RKV It looked go.

FLIGHT Roger. Roger on that.

RKV Do you want him to stay in that configuration?

FLIGHT Stay in that configuration. We'll think about it awhile and see what he used between here and the CSQ.

RKV We'd like you to stay in that configuration for awhile. We'll talk to you over CSQ.

S/C OK. Fine.

RKV OK. I've got a short flight plan update for you.

S/C Stand by one minute.

FLIGHT And tell him he's free to use the attitude control during that period.

RKV Roger.

FLIGHT You copy that, RKV?

RKV Copy. The flight plan update -- time 218.45 and another time 291 06. We'd like to establish them as test No. 1.

S/C Roger. I copy.

RKV OK. You're free to use the attitude control between now and CSQ.

S/C OK. Thank you.

RKV Roger. Did you copy, Flight?

FLIGHT Has he got the maneuvering heaters on?

RKV That's affirmative.

FLIGHT Did he have them on?

RKV He didn't say. I only told him to turn them on.

FLIGHT Yeah, would you ask him if he heard our HF?

RKV OK. Gemini 7, RKV.

S/C Go ahead.

RKV OK. Would you confirm whether you had your maneuver heater switch breaker on?

S/C Affirmative.

RKV OK. Did you hear Houston calling you on HF?

S/C Roger.

RKV You did hear?

S/C Negative. We did not hear.

RKV OK. Did you copy, Flight?

FLIGHT Affirmative. Why don't you tell him to maintain attitude between here and the CSQ, so it'll give us an idea of how much fuel it takes to maintain attitude for that length of time?

RKV We'd like you to maintain attitude until CSQ. Flight wants to know how much petrol you use.

S/C Roger.

FLIGHT Also, tell him that we're considering using his attitude control for an MSC-4 over Hawaii although at this time the weather doesn't seem

too good and see what he thinks about that.

RKV Roger. We're considering using the attitude control for an MSC-4 over Hawaii; however, the weather doesn't look good in Hawaii right now.

S/C Roger.

RKV All systems look good, Flight.

FLIGHT Roger.

RKV Gemini 7, ...

S/C Roger.

RKV OK.

RKV has LOS.

FLIGHT Roger.

END OF TAPE

This is Gemini Control Houston at 289 hours 8 minutes into the flight. The Department of Defense has advised -- advises that the second stage of the Gemini 6 Launch Vehicle impacted about 10 minutes ago. They estimate 2:30 p.m. central standard time at a point near Midway Island in the Pacific, 29 degrees north, 179 degrees west. That is the second stage of the Gemini 6 Launch Vehicle. We had voice communications by way of the Rose Knot some 10 minutes ago, but communication was so garbled that it is not intelligible and we are going to pass it on to the transcriptionist to see what they can get out of it, but we doubt that they will get very much. Elliot See is in communication now with the spacecraft and let's tune in on that conversation.

Cap Com .... We ran out of time and I didn't get that from you before. Gemini 7, Houston. Are you checking the vision test scores for me?

S/C We haven't taken the test, I'll have to give them to you later on.

Cap Com Roger, did you take it yesterday. They tell me we did not get any scores yesterday.

S/C We took it yesterday and recorded it, but I'll have to check it in the log book and I'll give it to you.

Cap Com Roger. Do you still have your number 1 delta P light on, Frank?

S/C Roger. They are both on.

Cap Com Roger.

S/C We are keeping real close check of the current, and if they -- if section 1 current starts to drop, I'm going to really ... ... (garbled).....

Cap Com Say again 7.

S/C I say if the current -- and we are keeping very close check on section one current.

Cap Com Roger, you are checking section 1 current carefully, say again the rest.

S/C I say if it starts to drop tonight, I'm going to hate to see that carrier go by tomorrow.

Cap Com We are going to take care of that Frank. Don't worry.

S/C Com Okay.

Cap Com Gemini 7, Houston. For your information, we are considering turning off section 2 completely if the delta P light does not go out soon. We feel that that should improve the situation.

S/C. Very well.

This is Gemini Control Houston. That may wrap up the conversation via Tananarive. If we are fortunate with weather this time, an MSC-4 Laser type experiment will be attempted over Hawaii, and that's all the flight plan calls for up to that point. The - otherwise the schedule says exercise between the Coastal Sentry Quebec, well, right over the Coastal Sentry Quebec and then at Hawaii the MSC-4, also there is a housekeeping period assigned there followed by a dinner period beginning between Hawaii and the RKV at oh, about an hour from now. This is Gemini Control Houston.

END OF TAPE

This is Gemini Control. We are 289 hours and 40 minutes into the mission of Gemini 7. At this time Gemini 7 is on revolution 181 and is passing over the Pacific Ocean and shortly will come up over the Hawaiian Tracking Station. A few minutes ago we had a voice communication between Gemini 7 and the Coastal Sentry Tracking ship and at this time we will play back that voice tape:

CSQ — CSQ has TM solid.

Flight — Roger. You got the delta P light.

Does he have the delta P light?

CSQ — That's affirmative.

S/C — This is Gemini 7.

CSQ — Roger, we are going to attempt an MSC-4 over Hawaii this rev.

S/C — Roger.

CSQ — Can you give me an evaluation of how you have been able to maintain attitude control ... (garble) ...

S/C — We maintain it okay.

Flight — What's his PQI?

S/C — ... (garble) aline the platform with.

CSQ — Very good. Say again Flight.

Flight — What's his PQI? Propellant quantity.

CSQ — Gemini 7, CSQ. Give me a propellant quantity.

S/C — Stand by. 8 percent.

CSQ — 8 percent, right.

S/C — Roger.

CSQ — Rog.

Flight — I copy.

CSQ — Would you also give me an OAMS source pressure readout.

S/C — Stand by.

S/C ..... (garble) pressure reads 1100, 1100.

CSQ Roger, copy. Did you copy Flight?

Flight 1100 psi, is that his source pressure .

CSQ That's affirmative.

Flight Rog. Did you send your summary, CSQ.

CSQ Roger, it's been transmitted.

Flight Rog.

S/C I still have both delta P lights, CSQ.

CSQ Roger. .... (garbled)...

Flight What did you say. He just lost the delta P light?

CSQ Negative Flight. He said he still has both.

Flight Rog. We need a main class 1.

CSQ Roger. It's on its way.

Flight CSQ, Houston Flight.

CSQ Go ahead Flight.

Flight You might tell him that the ground readouts of his fuel don't show any detectable usage since we last saw him.

CSQ Roger. Gemini 7, Houston advises that they have -- that the ground readouts do not show any appreciable usage since RKV.

S/C Roger.

That was taped voice communication between Gemini 7 and the Coastal Sentry Quebec tracking ship. Here in the Mission Control Center we are in the midst of a shift change with the White Team of Flight Controllers moving into the consoles and the Red Team moving out of the Control Center. Our Flight Director from the Red Team, Christopher Kraft and several of his controllers will shortly be over at building 6 for their daily press conference. We are now 289 hours and 45 minutes into our mission. Gemini 7 is passing over the Pacific and shortly will come up on the Hawaiian Tracking Station. This is Gemini Control. END OF TAPE

This is Gemini Control. We are now 290 and one minute into the mission of Gemini 7. At this time Gemini 7 is passing over the Pacific on revolution 181. A few minutes ago we had voice communications with the Hawaii Tracking Station. And at this time we will play back that voice tape.

HOU — Hawaii is TM solid and we show him go.

HAW CAP COM — Gemini 7, Hawaii Cap Com

S/C — Go ahead Hawaii.

HAW CAP COM — Roger, we show you go on the ground and I have a PLA update for you when you're ready to copy.

S/C — Stand by one. Go ahead.

AW CAP COM — Roger. All REP 400 K 21 + 20 for all areas. Area 184-3 293 55 38, 185 Bravo 295 47 56, 186 Delta 296 29 06, 187 Delta 298 05 20, 188-2 299 37 01, 189-1 301 06 40, 190-1 302 42 08, 191-1 304 17 38.Weather in all areas is good.

S/C — Roger.

HAW CAP COM — We have nothing further for you, we're standing by.

HOU — Do you have both Delta P lights on the ground, Bill?

HAW CAP COM — Roger, we've got both.

HOU — Okay, let me tie you up and make sure which ones you've got. You've got BB03 and BB04.

HAW CAP COM — Rog.

HOU FLIGHT Hawaii Cap Com, Houston Flight.

HAW CAP COM Go ahead flight, Hawaii Cap Com.

HOU FLIGHT Roger, I've got some more data you can pass on the crew here and it's cryo ground rules. The Fuel cell H2 heater auto, fuel cell D2 heater auto,ECS 02 heater off, quantity read fuel cell 02 position, minimum on fuel cell H2 pressure 490. Please pass it up.

HAW CAP COM Roger. Pressure again.

HOU FLIGHT 490.

HAW CAP COM Roger. We have cryo ground rules for you to

HOU copy.

S/C Go ahead, Hawaii.

HAW CAP COM Okay, fuel cell H2 heater auto, fuel cell 02 heater auto, ECS 02 heater off, quantity read switch fuel cell 02, minimum H2 pressure 490.

END OF TAPE

This is Gemini Control. We are at 291 hours and 20 minutes into the flight of Gemini 7. At this time, our spacecraft crew is flying over the Pacific between the Coastal Sentry tracking ship and Hawaii, just about mid-way between. They are on the 182nd revolution. During the past hour we have accumulated two voice tapes, one over the Rose Knot tracking ship at the beginning of this 182nd revolution and just a few minutes ago over the Coastal Sentry tracking ship and at this time we will play back those voice tapes.

Flight RKV Cap Com, could I have a main summary at acquisition and one at LOS, please? RKV Cap Com, Houston Flight.

RKV Houston Flight, RKV.

Flight Okay, could I have a summary at acquisition and one at LOS.

.V Roger.

Flight Okay, we are standing by.

RKV RKV has telemetry solid.

Flight Roger RKV.

RKV All systems are go Flight. Will you transmit a TX.

Flight Roger.

RKV Gemini 7, RKV.

S/C Go ahead RKV, this is 7.

RKV Roger, we'd like another purge. We will use the same procedure we used last night, with the exception that we would like you to purge section 2 first.

S/C Roger, purge section 2 first, other than that it is a normal purge.

.V Right.

S/C Would you inform Flight that we've run out of OAMS fuel also.

We are now - the ØAMS regulated pressure is dropping 300 and 270 and we have stopped using it.

Flight — Roger, we've been monitoring that.

RKV — Roger. Flight, RKV.

Flight — Go, RKV.

RKV — It looks like 267 in the reserve tank.

Flight — 267 in reserve tank.

RKV — Roger. Gemini 7, we will give you a systems update over the CSQ or Hawaii.

S/C — Okay. I have those two vision scores for yesterday and today.

RKV — Okay.

S/C — Borman missed 8, Lovell missed 3. Today Borman missed 6 and Lovell's is just taking the test. I'll give it to them over Hawaii.

RKV — Okay.

S/C — There was some talk to take ... (garbled) ... also.

RKV — They are still looking at it.

S/C — Okay.

RKV — The .....(garbled) tank is still holding at 267 Flight.

Flight — Roger, understand.

S/C — Purging section 1 now.

RKV — Okay. He has completed the purge on 2, starting on 1, Flight.

Flight — Say again, Bill.

RKV — He finished the purge on 2. He is starting on 1. We still have both delta P lights.

Flight — Okay.

S/C Would you ask Flight if they want us to purge more often during the night because of the higher load on section 1.

RKV Stand by, I'll check.

Flight We are working on that now, Bill.

RKV They are working on that right now. We'll update you over the CSQ.

S/C Okay.

RKV Flight, he's got his quantity read to ECS O_2. I think for the night we want it in --

S/C ..... (garbled) tomorrow, or we have to pop that auxiliary tank.

RKV Roger..

Flight Roger. We concur in going ahead and popping the auxiliary tank now.

RKV You can go ahead and pop the volkswagen tank if you want to.

S/C Roger, I think I prefer to save it for alining the platform.

RKV Okay.

Flight We heard that.

S/C .... (garbled) just to see if it works.

Flight That's what our intention was.

RKV We think that that is a pretty good idea. Would you put your quantity read switch to fuel cell O_2. That would be the night-time configuration.

They haven't copied yet Flight.

Flight Okay.

RKV Purge complete.

Flight Roger

RKV They still have both delta P lights now. The purge is complete, Flight

Flight Roger.

S/C Okay, I understand. . garbled . .

RKV . . garbled . .

Flight Go ahead

RKV . . garbled . .

Flight That's affirm.

RKV RKV has LOS. TM, flight.

S/C 2 alpha 28.0 and 2 Charlie is 29.0.

CSQ Roger, copy. Want the prop quantity and OAMS source pressure readouts.

S/C Roger, prop quantity now reads 7 percent. And the Source pressure is about . . garbled . .

CSQ I'd like to find out what percentage of stowage is now complete and what your estimate is to complete the rest of it.

S/C . . garbled . .

CSQ That's affirmative.

S/C It would take us about an hour to stow.

CSQ Roger, I understand. Did you copy flight?

S/C We've got our suits on also.

CSQ Roger, Gemini 7.

Flight Roger, we got that.

CSQ Did you copy that Flight.

Flight Affirmative.

CSQ Looks like we're reading 297 psi on all direct pressure.

Flight Roger.

CSQ TC-22 is reading 300 psi now, Flight.

Flight Roger. Say that again CSQ.

CSQ TC-22, 300 psi.

Flight Okay.

CSQ That's the reserve tank pressure.

Flight Roger, got it. I'm going to try and get you guys moving tonight, after you finish your last pass.

CSQ Yea, we've got stuff sliding all around right now. Getting real rough.

Flight Okay.

CSQ We've got 45 miles an hour winds.

Flight Roger.

CSQ Gemini 7, I have a map update for you, when you are ready to copy.

S/C . . garbled . .
Go ahead.

CSQ Point was node 5295 22 20, Rev 185, 12.7 degrees West, right Ascension 07 43 46.

S/C . . garbled . .

CSQ Roger.

S/C . . garbled . .

CSQ Negative, Gemini 7. That's all,we are standing by.

Flight You can tell him we are planning to go open circuit on the entire section 2 over Hawaii, we'll advise him.

CSQ Gemini 7, Flight just advised that they plan to go open circuit on section 2 over Hawaii. They will advise you later.

S/C Okay.

CSQ Flight do you want a LOSA.

Flight Affirmative.

CSQ Roger. CSQ is LOS.

Flight Roger, CSQ.

That was taped voice communication between Gemini 7 and the Rose Knot tracking ship, also the Coastal Sentry tracking ship on the 182nd revolution. We are still in the 182nd revolution and our spacecraft has been - right now in voice communication with the Hawaiian tracking station. The quality of voice transmission at this pass is extremely good and at this time we will play back the tape of that voice communication.

AFD Hawaii Cap Com, AFD

HAW AFD, Hawaii Cap Com

AFD We've got some C-band track for you; the flight plan update concerning the purge after awakening; and this ledger on the systems update is really the section 2 off line.

HAW Okay, you want to take it off the line in Hawaii.

AFD Yea. And we want to give them 192-lg TRC and 207-lg TRC, and also advise them that their gauge reading on their fuel is correct based upon our ground computations. So when they hit zero they ought to hit zero really.

HAW Missed the last part, say again.

AFD We advise that the 7 percent gauge reading on propellant

remaining is correct by ground computation.

HAW 10 percent gauge . .

AFD 7, 7 percent. His gauge reads precisely what we have and those TR times are for their planning for the next couple of days.

HAW Okay.

AFD All all that you should have.

HAW I don't have the TR time.

AFD Okay. Wait about 2 minutes and give me a yell, if you don't see it.

HAW Okay. You say the 7 percent reading on his gauge is correct.

AFD That correct and he can depend on the gauge.

HAW Roger.

AFD And how are you today.

HAW I'm fine, how are you?

AFD This is sort of an anticlimax, compared to yesterday.

HAW Say again.

AFD Today is sort of an anticlimax compared with yesterday

HAW I don't call it an anticlimax, I call it the end of a good day for me.

AFD This is just the beginning of a long night for us.

HAW Poor baby.

Flight Going to be a long night for many flight controllers.

HAW Yea. The White Team. You'll keep him GO, we'll be back in the morning, right?

AFD Wilco.

HAW TM solid in Hawaii.

Flight Go Hawaii.

HAW Roger. Gemini 7, Hawaii Cap Com.

S/C Go ahead, Hawaii.

HAW How are you doing?

S/C Pretty good, how are you?

HAW Okay, not bad. We are showing you go down here and I want to power down your section number 2, if you will go along with it.

S/C Fine.

HAW Okay. Fuel Cell control number 2 circuit breaker closed.

S/C It's closed.

HAW Section 2 power switch to OFF.

S/C Off.

HAW Fuel cell control number 2 circuit breaker to OPEN.

S/C It's open.

HAW And verify your cross over switches at the OFF position.

S/C I am.

HAW Okay. Got some more data for you, if you are ready.

S/C Stand by a minute, what kind of data?

HAW O I've got a couple of g.e.t. RC's for you and a small flight plan change.

S/C Roger, just a minute.

HAW What position is your adapter C-band beacon in?

S/C Command.

HAW Okay

S/C Go ahead, I've got some paper now.

HAW Okay. 192-1 305:52:25 ; 207-1 329:57:56; okay got that.

S/C] Roger.

HAW Okay and want to advise you that the 7 percent gauge reading you have is correct by ground computation. So anything you read on your gauge is correct.

S/C Okay.

HAW Okay, got a couple of changes for your flight plan. 301: 29:12 There'll be a fuel cell purge after awaking and this will be at Grand Turk on revolution 189. 301:30:00 Biomed recorder number 2 to the off position. That's it.

S/C Roger.

HAW Okay, do you need anything now?

S/C No, just a fuel section 1, is all.

HAW Say again.

S/C Fuel section 1.

HAW Okay, let's just hang in there, we'll be okay.

S/C Okay.

HAW Okay, will you take your biomed tape recorder number 2 and put it in continuous position.

S/C Roger.

HAW Thank you.

Flight Hawaii Cap Com, you can advise them we will be pumping music out on HF for the next 2 hours or longer if they'd like it.

HAW Okay. Telling me they are going to give you music for the

next two hours on HF if you'd like it and maybe longer.

Huh, would you like it more than 2 hours?

S/C We are going to start stowing tonight, so probably more would be good. We are going to try to get everything packed away tonight.

HAW You say you want more or less?

Flight We got it, he wants more.

S/C About 3 hours would be good.

HAW Okay, very good.

Flight Hawaii could we have a readout in GDO7 please?

HAW Roger, Flight GDO7 is 30.8.

Flight What is that, tenths or what?

HAW Degrees.

Flight Okay, we must have got hidden lane because we saw a tenth of a hundred and three degrees, on your summary.

HAW Yea, that's what they tell me now. It's showing 130.

Flight Is that a valid reading?

HAW Negative.

Flight Okay.

HAW We'll get another cut on here, hang on.

Flight Roger, why don't you give us an LOS main.

HAW Roger.

Flight And let's have another AIM.

HAW Yea, that's on the alpha rudder.

It's reading 30.8 degrees.

HAW Flight, your OAMS reserve tank pressure is 296 psi.

Flight Roger, got it.

HAW He's looking real good now.

Flight Roger.

S/C No we couldn't a minute ago, try'em again now.

HAW I'm picking it up here, how are you doing?

S/C Can't hear a thing.

HAW You're getting . . garbled.

Flight Okay Hawaii, we're going to start pumping it through you next rev so they will hear it.

HAW Okay. Okay, we'll see you all in the morning. We'll be standing by for the rest of this pass.

Flight Why don't you tell the crew that every - - that we'll be pumping the music through Hawaii.

HAW Okay. And that HF will start coming out on Hawaii station on the next rev, so you can listen pretty well as you come up on this side of the Pacific.

S/C Fine and dandy.

HAW LOS on all systems in Hawaii. Good evening.

Flight Well done, Ed.

END OF TAPE

This is Gemini Control. We are now 292 hours and 24 minutes into the mission of Gemini 7. At this time Gemini 7 is moving out over the Indian Ocean on the 183 revolution around the earth. Our crew has been in a sleep period for the past hour and we have no voice communications with the spacecraft throughout this sleep period. Here in the Mission Control Center our flight controllers are settling for the long evening, working on their reports, monitoring the systems from the ground as the data is fed here through the tracking network. This is Gemini Control, 292 hours, 25 minutes into the Gemini 7 mission.

END OF TAPE

This is Gemini Control. We are now 292 hours and 53 minutes into the flight of Gemini 7. At this time Gemini 7 is passing over the Pacific and very shortly will be between the Coastal Sentry and the Hawaiian tracking station. Here in the Control Center, our flight directors, all three of them, Chris Kraft, Gene Kranz, and John Hodge, representing the red, white and blue teams respectively, have been studying data on the Gemini 7 fuel cell situation. Kraft told us that fuel cell number one aboard Gemini 7 continues to perform in excellent fashion. He said we are going to continue to monitor its performance throughout this night, but all indications are that the flight will continue as scheduled. That message from Chris Kraft, flight director for this mission. This is Gemini Control, 292 hours and 54 minutes into the flight.

END OF TAPE

This is Gemini Control. We are 293 hours and 20 minutes into the flight of Gemini 7. At the present time, Gemini 7 is on its 183rd revolution around the earth and is practically ending that revolution coming up now over the Pacific Ocean and reaching for the west coast of South America. Aboard our spacecraft, the crew is in a sleep period and has been for the past two hours. As we reported a few minutes ago, Flight Director Chris Kraft, studying the data on the fuel cells aboard Gemini 7 along with Flight Directors Eugene Kranz and John Hodge, has decided that we will continue to monitor the fuel cell situation on Gemini 7 throughout the night. He said that fuel cell Number 1 continues to perform in excellent fashion and that all indications are that the flight will continue as scheduled. This is Gemini Control, 293 hours, 21 minutes into the mission.

END OF TAPE

This is Gemini Control. We are 294 hours and 20 minutes into the Gemini 7 mission. At this time Gemini 7 is on its 184th revolution around the earth. And at the present time is passing over the Coastal Sentry. We have had no voice communication with the spacecraft until,well into the, since we have been into the sleep period and our ground readouts of telemetry data from the spacecraft, the latest one we have was from the Rose Knot Tracking Ship at the beginning of this revolution. It said "the crew probably asleep, judged by respiratory traces" but pilot pulse higher than usual sleeping rates indicating that the pilot may not be asleep. This is Gemini Control, 294 hours 21 minutes into the mission.

END OF TAPE

548-559

MISSION COMMENTARY TRANSCRIPT, 12/16/65, 8:50 p.m. Tape 548, page 1

This is Gemini Control. We are now 295 hours and 20 minutes into our mission. Gemini 7 at this time is passing over the South Atlantic, near the Ascension Island tracking station. And our crew is asleep according to the ground data readouts. We have a little note here that might be of interest. Back on March 4th through the 15th, 1957, a Navy nonrigid aircraft designated ZBP number 2 completed a nonstop round trip Atlantic crossing simultaniously establishing a new world endurance record for unrefueled flight of 264 hours and 14 minutes. Commanding the flight was Navy Commander J. R. Hunt. This morning astronauts Frank Borman and Jim Lovell received a telegram of congratulations from Commander Hunt on their setting a new record for unrefueled flight. An item of interest. Our spacecraft is now on its 185th revolution, 295 hours 21 minutes into the mission. The crew is in a sleep period and from our ground data we believe they are asleep. This is Gemini Control.

END OF TAPE

This is Gemini Control, 296 hours and 20 minutes into the Gemini 7 mission. At this time the Gemini 7 is passing over the Pacific on the 185th revolution around the earth. Our latest telemetry data has reached the ground, indicates the crew is asleep. This is Gemini Control, 296 hours and 20 minutes into the mission.

END OF TAPE

This is Gemini Control. We are now 297 hours and 20 minutes into our mission. With Gemini 7 passing over India on the 186th revolution. Here in Mission Control the Blue Team of flight controller are moving into the consoles and the White Team will shortly be releived of their duties. Among the controllers on the Blue Team, tonight who is present, is spacecraft communicator astronaut Charles Bassett, who is the Blue Team Cap Com. Mr. Bassett has been notified by the US Air Force of his promotion to Major and he is receiving congratulations from the White Team controllers here. Aboard our spacecraft, the readout from the ground data the crew appears to be asleep. That ground data is the latest we have. They have been sleeping now - appeared to be asleep for the past 3 or 4 hours. We are now 297 hours 21 minutes into the mission. This is Gemini Control.

END OF TAPE

This is Gemini Control. At 1:30 a.m. central standard time Gemini 7 had been in space for 300 hours, surpassing the combined duration of the GT-3, GT-4, and GT-5 flights. The spacecraft is now beginning its 188th revolution, is in contact with our Antigua Station now having just passed the Grand Turk Station. Grand Turk reported that the delta P light on the section 1 of the fuel cell is no longer on*, the currents are very stable, and the cell seems to be in excellent condition. All the information we have here is that the fuel cell is in excellent condition. The pilots appear to be asleep. That's the report we have from the Surgeon. They appear to be asleep. The last report we had over the Canary Islands was about midnight and the, both delta P lights were on there, although they reported all systems still GO. We have an apogee now of 164.1 and a perigee of 158.4 nautical miles. Some information about the recovery area: Weather in the recovery areas is looking good for today or tomorrow. There is a go--no-go decision on whether or not we go through Friday due in about 2 hours, 3 hours. Right now the spacecraft is leaving the Antigua communication area heading toward Canary Islands. There's been no conversation, of course, both members being asleep. The retrofire time, if it was decided to bring the spacecraft down Friday, would be at 7:22 28 central time with a splash predicted to be about 7:58.. Of course, that's all dependent on the go--no-go decision due at about 5 a.m. central time. So at 300 hours 2 minutes and 35 seconds into the flight of Gemini 7, this is Gemini Control.

END OF TAPE

* See correction on tape 552.

This is Gemini Control. At 300 hours and 20 minutes into the flight of Gemini 7. Gemini 7 is on its 188th revolution over north Africa and has its delta P light for section 1 on. This was reported at the Grand Turk Station during its, the last pass across Grand Turk not very long ago. It just passed the Canary Station and Canaries reported also the systems looking very good and the section 1 delta P light on. I'm sorry - out. The delta P light is not on, it is out. The information looks very good, the current looks very stable. The pilots are apparently asleep and another bit of statistics. At 293 hours 45 minutes and 12 seconds, a few hours ago, Gemini 7 accumulated more time than Gemini's 3, 4, and 5 combined. So at 300 hours 20 minutes and 59 seconds into the flight, this is Gemini Control.

END OF TAPE

This is Gemini Control, at 301 hours and 20 minutes into the flight of Gemini 7. I just spoke with Flight Director John Hodge who says this: "As things look now, I see no reason why we can't complete the 14-day mission." That's a quote from John Hodge. The fuel cells are okay, section 1 is okay, and they plan to purge both sections of the fuel cell and take another look at stack 2B pretty soon, that's the working stack in the second section. Stack 2A and stack 2C have been off the line, have been shut down and are not going to be operating. The actual go-- or no-go decision will be passed up to the crew over Bermuda at the beginning of the 190th revolution. That's about one and one-fifth revolutions from now. We're getting very close to the beginning of the 189th. The Flight Director advises that we need little less than 15 amps to continue the flight powered down and according to EECOM we could get that from the two poorest stacks that are operating and we have four stacks operating and not very poorly, they're operating very well. We estimate that there are at least 150 hours of power in the fuel cells beyond the end of the 14-day mission. Besides that, there are 10 hours of battery power available prior to retro. That means there is 10 hours if the fuel cells were to suddenly stop operating this minute, 10 hours from now we would have 10 hours from now to fire the retros and still have a good power configuration. We're keeping track of the delta P light. It went on - it was discovered on at midnight over the Canary Islands during rev 187 and was reported off at the beginning of rev 188 by Grand Turk and Antigua. It was still off over Canary during the 188th revolution, this revolution, and it is still off according to the Carnarvon Station, which was just passed by the Gemini 7 spacecraft now heading toward across Central America. So at 301 hours 22 minutes in the flight of Gemini 7, this is Gemini Control.

END OF TAPE

This is Gemini Control, at 301 hours and 53 minutes into the flight of Gemini 7. Gemini 7 is now passing over Africa, having just passed the Canary Island station. And we learned over the Canary Island that the section 1 light had come back on. The - previous to the Canary station - over that Canary station by the way there conversation mostly was between the station and flight control. The crew didn't have too much to say, they just read out their stack voltages which coincided with information that had been received over the state-side pass a little while ago. We have a tape of the conversation over the state side pass. We'll play that tape for you now.

Cap Com — Gemini 7, Houston.

S/C — Come on in Houston.

Cap Com — Good morning Gemini 7. Blue Team wishes you a good morning and I have a purge procedure for you.

S/C — What was that again.

Cap Com — I have a purge procedure for you.

S/C — Roger.

Cap Com — While I'm doing this I'd like to get fuel cell H_2 and ECS O_2 readouts from you.

The procedure is cross over on; normal purge section 1; request open circuit voltage stack two B.

S/C — You are going to have to come in again Houston. You cut out.

Cap Com — Roger. Place your cross over ON; normal purge section 1; request open circuit voltage stack 2B.

'C — Only got the last part - open circuit voltage stack 2B.

Cap Com — That's affirm. Let me start over - cross over ON, first

item, cross over ON; normal purge section 1; request open circuit voltage stack 2B. Gemini 7, Houston, do you read?

S/C Normal purge section 1; open circuit voltage stack 2B, is that correct?

Cap Com That's affirmative.

S/C Purge 1 coming up.

Cap Com Request that you place your fuel cell control number 2 circuit breaker ON.

S/C Rog. Will do after the purge of the first section.

Cap Com Okay good. In the meantime can you give me some fuel cell H_2 readouts?

S/C Roger Charlie. H_2 reads . . garbled . . 510 pounds.

Cap Com Cryogenic gauging switch to ECS O_2. Gemini 7, may we have an ECS O_2 readout?

S/C Coming up. Roger. 1540 pounds at about 40 percent.

Cap Com Roger, replace switch in fuel cell O_2 position.

S/C Roger, Houston 7

Cap Com Go ahead 7.

S/C Why do you want the fuel cell number 2 circuit breaker ON if we do not plan to purge section 2?

Cap Com We plan to purge section 2 with stack 2A and stack 2 switches OFF so we'll be purging stack 2B only.

S/C Roger, understand. 2B open circuit is about 32 volts.

Cap Com Understand open circuit 32 volts on 2B. Then perform a

normal purge of section 2 noting that your fuel cell control number 2 circuit breaker is ON, perform a normal purge of section 2.

S/C Roger , open circuit.

Cap Com Roger, that's with open circuit.

S/C Roger . . garbled . .

Cap Com Gemini 7, at the completion of this purge,I have a short flight plan update to give you.

S/C Roger, Houston. Go ahead with the flight plan update, Houston.

Cap Com Roger. Title node time 302:53:36; rev 189; 128 degrees west; right Ascension 07 hours 34 minutes 59 seconds. Flight plan time line update change 302:00:00 to 302:15:00. Correction change that to 302:10:00. Getting back to the purge now I'd like to request the open circuit voltage of stack 2B.

S/C Roger, purge is complete. Open circuit voltage of stack 2B is above 32 volts, full scale.

Cap Com Leave 2B on the line until Carnarvon, current may be low due to the loop temperature. We'd like to have the section 1 power switch ON. That's the section 2 power switch ON.

S/C Place section 2 power switch on at this time.

Cap Com Roger, then place your fuel cell control number 2 circuit breaker OFF.

S/C Roger, control circuit breaker number 2 if OFF.

Cap Com And cross over OFF.

S/C Roger, the cross over is off.

ap Com That completed the purge procedure, I'll continue with the flight plan. Time 303:07:10; Go - No-Go at Bermuda. Both

temperature probes should be inserted at 302:55:00 for a crew status report on the command pilot at Canaveral at time 303:04:00. At 303:18:10 PLA update. Item S-5 303:26:00;sequence 06;mode 01;pitch 90 degrees down; yaw zero degrees. That completes the flight plan update.

S/C Roger, one question here. Did you say both temperature probes or just oral temperature probe?

Cap Com That's both oral temperature probes.

S/C Roger, both.

END OF TAPE

This is Gemini Control, at 302 hours and 20 minutes into the flight of Gemini 7. We are on the 189th rev, halfway around the World over Carnarvon and the crew is at this moment talking with the Carnarvon Ground Station. We are expecting at 4:30 a.m. central time to get the go--or-no-go decision for 206 revolutions, landing at the beginning of the 207th. That's called 207 dash 1, where the Carrier Wasp is in the Atlantic recovery area. If we were to go for 207, and all indications are that we will, the time of retrofire would be 7:28:01 central time tomorrow with a splash at 7:59:10. The Flight Directors indicates the fuel cells are looking very, very good and that we will probably get a GO decision over Bermuda in about 40 minutes. At 302 hours 21 minutes into the flight of Gemini 7, this is Gemini Control.

END OF TAPE

This is Gemini Control, at 302 hours and 46 minutes into the flight of Gemini 7, now crossing the South Pacific on its 189th revolution headed toward Mexico and south of Florida. We had a pass over Carnarvon just a few minutes ago where they got into a discussion of an inter-connector, you'll hear that discussion. They're talking about a connector that connects the pilot's inlet hose, oxygen hose, to his outlet hose. This is to close off the circulation that his hoses would provide. To evaluate the cabin at only 50 percent circulation using just the Command Pilot's oxygen hose circulation capability. This is for an evaluation of the cabin at 50 percent circulation in the shirt-sleeve environment. You'll hear the Pilot say that he doesn't have an inter-connector on board. The feeling here in Mission Control is that during his stowage evaluation yesterday he stowed it somewhere, or that he put stowage on top of it. They're discussing that now. So let's play that tape from Carnarvon.

CRO Gemini 7, this Carnarvon Cap Com.

S/C All right Carnarvon, Gemini 7.

CRO Roger. Good morning from Australia.

S/C Good morning.

CRO I have a flight plan update for you.

S/C Go ahead.

CRO Roger. Time: 303 54 06. Remarks: Crew status report at Carnarvon. Time: 304 32 12. Shirt-sleeve evaluation. And I have a procedure on that for a little later on.

Time: 304 38 39. Purge fuel cells at the Cape.

Title:. S8:013. Yeah, that's it. S8/D-13: At time 304 54 00. Sequence 04. Due over Canaries and Kano. Do you copy?

S/C Roger. Understand. S8/D-13 Sequence 04 due over Canaries and Kano.

CRO Roger. Got a whole bunch more here.

Time: 306 00 00

FLIGHT Carnarvon, see if the delta P light -----

CRO Biomed recorder no. 1 to continuous.

MSC-4: Time 306 11 39. Sequence 01. Mode 01. Pitch 25 degrees down. Yaw 41 degrees left. Switch to mode 03 if beacon has successfully acquired. Time: 306 20 00. Begin exercise in eat period. Title: MSC-4. Time 307 35 36. Uh, say again on that. 307 35 26. Sequence 06. Mode 01. Pitch 30 degrees down. Yaw 24 degrees right. Switch to Mode 03 if beacon is successfully acquired. Are you copying me okay?

S/C Roger.

CRO Okay. S8/D-13: 307 48 37. Sequence 02. Pitch 30 degrees down. Yaw 1 degree right. Time of closest approach is 307 49 57. At time 308 00 00. Biomed recorder no. 1 OFF. Title: MSC-4. 308 12 30. Sequence 08. Mode 01. Pitch 30 degrees down. Yaw 6 degrees left. Switch to mode 03 if beacon has successfully acquired. Last item. Time: 308 41 41. Purge fuel cells at Carnarvon. Do you copy?

S/C Roger. We have it all, thank you.

CRO Roger. And this pass you should be coming directly over Carnarvon. During attitude would you take a check and see if you can see us?

S/C Roger.

CRO Flight. 2B now reads 3.71.

FLIGHT Very good.

CRO Okay. Gemini 7. I have your shirt-sleeve environment evaluation information whenever you're ready to copy that.

S/C Roger. Go ahead.

CRO All right. Item No. 1. Pilot: Connect suit nozzle together with inter-connect.

S/C Would you tell 'em we don't have inter-connect on board?

CRO Roger. Stand by, one.
Flight, they advise they don't have inter-connects on board.

FLIGHT Stand by.

S/C We sure brought that to a screeching halt!!

FLIGHT Tell 'em to scratch that. Scratch the whole thing. We'll get to them later.

CRO Rog.
They're going to rework that and they'll give you that information later.

S/C Thank you.

CRO Roger. Now that's all we have for you this pass. We're standing by. You're looking good from the ground.

S/C Very good.
Australia is beautiful in the daylight.

CRO Oh, mighty fine.
I guess it's been a long time since anybody up there has seen Australia in the daylight.

S/C Roger.

CRO Gemini, we also noted that you turned 2A on and off. Is that correct?

S/C Negative. Fuel cell 2A has never been touched.

CRO Roger. Thank you.

S/C Would you tell the people of Perth to turn off their lights now.

CRO Ha! Ha!

This is Gemini Control. We have some later word from the environment people about that inter-connector. There never was an inter-connector onboard the spacecraft. The procedure was apparently in error. They have a very easy fix however. Instead of just connecting the outlet to the inlet they will simply turn the outlet off - the inlet off - the oxygen inlet hose off and that will get exactly the same results and this information will be passed to the crew on this coming stateside pass, at which time we will also get a go--no-go decision on the continuation of the flight 'till Saturday morning. All indications from Flight Director John Hodge are that we will get a GO. He wants to get another quick look at all the information on this pass before he renders his decision and passes it up as the spacecraft goes over Bermuda. So at 302 hours 54 minutes into the flight of Gemini 7, this is Gemini Control.

END OF TAPE

This is Gemini Control at 303 hours and 20 minutes into the flight of Gemini 7, which is now approaching Canary Islands. Gemini 7 has a GO for 207-1. We will hear that GO on a pass across the United States. We'll play that tape now.

Cap Com Gemini 7, Houston.

S/C Go ahead Houston. You're on clear.

Cap Com Roger, I understand that you don't have any ear connects, our mistake. In leiu of that, I have another procedure.

S/C . . garbled. . crew status

Cap Com I beg your pardon.

S/C Want to get the blood pressure.

Cap Com That's right but let us hold the blood pressure until Canaveral AOS and request TM switch command.

S/C Command.

Cap Com We'll give you a hack on the blood pressure, Frank.

S/C Okay.

Cap Com I'd like to give you the procedure for the shirt sleeve environment evaluation.

S/C Standby.

Cap Com We've got good temperatures on both pilots.

S/C Go ahead.

Cap Com Roger, place the pilots suit flow valve OFF. Place the red hose in command pilot's legwell. Command pilot remain in previous configuration.

S/C Go ahead.

Cap Com Air flow as desired and the suit heat exchanger as desired.

Cabin heat exchanger full hot. Recirc valve 45 percent or 45 degrees. Evaluate the cabin fan on and off. Record cabin temperature test when scheduled. Air flow lever position; suit heat exchanger setting; and any subjective comments. You might take the same readings you took on the evaluations yesterday, Frank.

S/C Roger, We've already got that temperature probe stowed away in the back. I'll see if we can get it out.

Cap Com Well I would suggest that you don't unstow too much.

S/C Well last night we were told how long we had to get stowed and ready so we did.

Cap Com Right. Well we'll leave you some time in the flight plan today for stowage, about an hour. And we have some more time for review of your retrofire procedures. If comfortable you might keep this configuration, if not return to the configuration that you had yesterday.

S/C We are perfectly comfortable the way we are.

Cap Com I see Frank, they wanted to get an evaluation of your comfort level with this configuration as opposed to the one that you had yesterday.

S/C Roger, we know, we'll try it, but I was just saying that we're very happy and pleasant the way we are. But we will try your approach.

Cap Com Thank you Frank. In passing Frank, I might note that today is the 62nd anniversary of the 1st flight. I'm

passing you over to surgeon now.

Surgeon Gemini 7, blood pressure coming up.

S/C Roger, blood pressure.

Surgeon Your cuff is full scale, Frank.

S/C Roger.

Surgeon While that's bleeding down Gemini 7, give me your sleep report, please.

S/C Roger, I slept about 5 hours, very well last night, Dr. Coons. About 5 hours intermittently.

Surgeon That was the pilot - 5 hours intermittently.

S/C Frank

Surgeon Roger, copy.

S/C Standing by for exercise, coming down with blood pressure.

Surgeon Roger, Gemini 7. Full scale.

S/C Rog.

Surgeon Cut out that diastolic pressure on the preexercise blood pressure but no problem, Frank, we'll carry on with this one.

S/C Roger.

Surgeon Don't unplug it until I advise so. Coming through very nicely, coming nicely now. Have you had any trouble with your lips Gemini 7?

S/C Negative, pretty good. Jims beginning to look like Santa Clause though.

Surgeon We'll let him keep it on when he gets back. Roger, we've got a good blood pressure Gemini 7. I'll stand by for your food and water report now.

S/C Roger. Command pilot - water 1093 ounces; two meals - last night day 13 meal B, excuse me last night was day 10 meal C, we haven't had breakfast yet.

Surgeon Do you know yet what you are going to eat for breakfast?

S/C Standby we'll give it to you right now.

Surgeon And if you don't eat it all, advise us later on.

S/C Roger, the pilot is 845 ounces and last night it was the same meal, day 10 meal C.

Surgeon Did you eat them all? Did you eat the whole meal last night Gemini 7.

S/C Yes.

Surgeon Roger. I have a gun count, while you are looking up this mornings meal.

S/C 1 correction 0446.

Surgeon Did you say 0446 on the gun?

S/C 04460, I think.

Surgeon Roger, copy the last 0.

S/C Houston, we are going to have for breakfast this morning day 11, meal A.

Surgeon Roger, 11, meal A.
And how are your skins.

S/C We're in pretty good shape.

Surgeon Very good. You might use the wipes that are in the meal packs and do you have any difficulty with your throats?

S/C No, a little hoarse. Not bad.

Surgeon Roger, Gemini 7 back to the Cap Com.

Cap Com Gemini Go remote.

Cap Com Gemini 7, Houston

S/C Go ahead Houston.

Cap Com Roger, Have you been using your yaw left thrusters?

S/C Negative, we were instructed - Yaw left, yes.

Cap Com Roger, and did you perform on your S-5.

S/C . . garbled . . yes.

Cap Com Have you noticed any degradation in the performance of your yaw left thrusters?

S/C . . garbled . . Negative.

Cap Com Roger, request you bump your H_2 tank pressure to 550.

S/C Roger

Cap Com And we are standing by for your Go - No-Go readouts.

S/C Stand by . . garbled . . Go - No-Go readouts three batteries okay, a little bit lower than usual. .2 - .5 Fuel stack readouts 1A 5.5 amps; 1B 6; 1C 5; 2B 3.5; main bus voltage was was 25.5;RCSA 2900, 35 on temp, RCSB, 3000, 85 on the temp. Left secondary O_2 5400, right secondary O_2 5300.

Cap Com Roger. Copy.

S/C ..... (garble) ... all these experiments today.

Cap Com Roger, just do what you can get, Frank. The Blue Team is happy to give you the go for the big 207-1.

S/C Okay, fine. But on these experiments we are going to be awful careful with this fuel.

Cap Com I agree with that 100 percent, Frank.

S/C Okay.

Cap Com We are giving you a TR for 207-1.

S/C Thank you.

Cap Com We've got no map. We are trying to get it Gemini 7.

S/C Roger. We got it that time.

Cap Com Roger. Gemini 7, Houston. Did you copy that today is the 62nd anniversary of the first powered flight.

S/C Roger.

This is Gemini Control. In regard to that first powered flight, 62 years ago, Orville Wright flew the first Kittyhawk Flight. 120 feet he went in 12 seconds. There were four flights that day, the last one, another record was set by Wilbur Wright. He went 852 feet in 59 seconds. At 303 hours and 28 minutes into the flight of Gemini 7, this is Gemini Control.

END OF TAPE

This is Gemini Control, 303 hours 41 minutes into the flight of Gemini 7 and now crossing north of Tananarive beginning its trek across the Indian Ocean toward Carnarvon, Australia. It is in its 190th revolution and as you know we got a GO for 206 revolutions landing in a 207 dash 1 area tomorrow morning. As we crossed the Canary Islands we heard this conversation.

CYI Gemini 7, this Canary.

S/C Go ahead Canary.

CYI Roger. I have a PLA update for you.

S/C Stand by a minute.

CYI Okay.

S/C Go ahead.

CYI Okay. 1 niner 2 dash 1. 305 53 11. 1 niner 3 dash 4. 308 46 23. 1 niner 4 dash 4. 310 21 51. 1 niner 5 dash 4. 311 57 13. 1 niner 6 dash Bravo. 313 28 41. 1 niner 7 Bravo. 315 05 18. 1 niner 8 Bravo. 316 42 27. RET 400K. 21 ..... 20 for all areas. And the weather is good in all areas.

S/C Thank you, Canary.

CYI You're welcome.

FLIGHT Canary, Cap Com Houston Flight.

CYI Go ahead.

FLIGHT We asked the crew to get their H_2 pressure - fuel cell H_2 pressure up to 550 onboard. This means that he has to go to the ON position on the heater and force it up above the AUTO position.

CYI Roger ...

FLIGHT Would you check to see if he's done that, please?

CYI Roger.

Seven, Canary.

S/C Go ahead.

CYI Roger. Do you have your fuel cell heater switch in the ON position?

S/C Yep. ..... Canary and I've been holding it there ever since they told me to.

CYI Okay. Very good. We'd also like to know how much high-speed black and white film you have left.

S/C Same as we gave them on the ..... last night.

CYI Okay, thank you.

S/C Tell those flight planners.to take it easy. While we controlling the hydrogen ..... then we decided to get the cameras out, the third guy is copying down another PLA.

CYI And - - -

FLIGHT Understand.

S/C Roger.

This is Gemini Control with 26 hours 12 minutes and 37 seconds to go to retrofire time for a landing in area 201 dash 1 tomorrow. A lot of that Canary crossing conversation was pretty well garbled but that's the way we get it. I believe it's the multiple lines between the ground stations. At 303 hours 45 minutes into the flight of Gemini 7, this is Gemini Control.

END OF TAPE

This is Gemini Control. 304 hours, 20 minutes into the flight of Gemini 7, now near Canton Island on its 190th revolution approaching the United States. A short time ago, over the Carnarvon Station, we heard this conversation.

CRO Gemini 7, Carnarvon Cap Com. We have a valid temperature. Would bring your blook pressure up.

S/C 7 Roge.

CRO Gemini 7, Carnarvon Surgeon. Your cuff's full scale. Flight, Carnarvon. Stack 2B reads 2.846.

HOUSTON Roger, Carnarvon.

CRO Gemini 7. We have a valid blood pressure. We'll be standing by for your exercise.

S/C 7 Mark.

CRO Gemini 7, your cuff is full scale.

'OUSTON How about the Delta P lights?

CRO They're both on, Flight. We have C-Band track.

HOUSTON Roger.

CRO Gemini 7. We have a valid blood pressure. There are 2 things we'd like you to help us with if possible. Houston's records disclosed that Meal C of Day 10 that was reported eaten for supper last night has been eaten previously. Have you readily available any information on that, please?

S/C 7 Stand by, and we'll check it. Go ahead with your other questions while we're looking up this one.

CRO Do you have a report on your columns?

S/C Roger. I'll get you that, too.

CRO Thank you.

/C 7 Column 5 for the pilot was 32, Column 6 was 7.

CRO Roger.

S/C 7 Column 5 for the command pilot is 32, and Column 6 is also 7.

CRO Thank you. Got that.

S/C 7 As we understand it, Day 10, Meal C had been previously reported, is that correct?

CRO That's affirmative.

S/C 7 Roger. We have it here too at 221 hours. We must have made a mistake. We can go back and check on it. I think this bag is still in the cockpit. We'll check this report later on with the meal.

CRO Roger. Thanks a lot, Gemini 7. Surgeon out. Gemini 7, Carnarvon Cap Com. Everything looks real good from here on you.

S/C 7 Well, thank you, Carnarvon. ...(Garble)...

CRO Roger. Say again, 7.

S/C 7 I just said very good.

CRO Oh! Mighty fine. Everything's still looking good here on the ground, Flight.

HOUSTON Roge.

This is Gemini Control. 304 hours, 22 minutes into the flight. The spacecraft is still approaching the United States. We have this updated information on the retro-fire sequence for the entry into 207-1 recovery area, east of the Cape and south of Bermuda. It was in some error the last time. At splash, splash is now 14:05:10, Grenwich, which turns out to be 8:05 and 10 seconds, Central Standard Time. That entire sequence goes like this: retro-fire time 7:28:01; they begin communication black out period at 7:55:51; black out period lasts until 7:57:23; at 50,000 feet, they get a drogue and that's at 7:59:07; then at 10,000 feet at 7:00:48, ...I'm sorry...8:00:48, and splash at 8:05:10. At 304 hours, and minutes into the flight of Gemini 7, this is Gemini Control.

END OF TAPE

This is Gemini Control. Gemini 7 in its 304th hour, as a matter of fact, 304 hours and 30 minutes into its flight is ending its 190th revolution and approaching the West Coast of the United States. The crew has 25 hours and 27 minutes and 35 seconds to go to retrofire time for a landing in the Atlantic, South of Bermuda tomorrow. Speaking of Bermuda, Astronauts Wally Schirra and Tom Stafford have departed, or are due to depart this very minute from the aircraft carrier Wasp in the prime recovery area to fly to Bermuda. Command Pilot Wally Schirra, Command Pilot of Gemini 6, that is, will fly co-pilot on COD aircraft 755, that is a twin engine Grumman and Tom Stafford will fly as co-pilot on COD aircraft number 763. There is an airforce C140 Jetstar standing by at Kindley Air Force Base Bermuda to fly the Gemini 6 crew to the Cape and they should arrive at Cape Kennedy somewhere around noon, 12:30 or 1 o'clock eastern standard time today. That's about 6 hours from now, 6½ hours from now. Right now the spacecraft is approaching the Guaymas Station in Mexico. They are getting ready to undergo the shirtsleeve evaluation. They are still, of course, on the dark side of the earth, they are coming toward the dawn. They are scheduled to purge their fuel cells during this pass across the United States. As soon as we pick them up we will' bring them to you over this line. On our Canton pass a few mements ago, there was absolutely no conversation between the spacecraft and the ground although data did come into the Control Center from Canton. And on Hawaii, they were slightly out of reach of the Hawaii Station. The next several passes should go across the United States. Right now they are approaching the United States we have got contact with them. Let's tune in on that conversation now.

Cap Com ..... band to continuous.

Still no conversation except from the ground to the spacecraft, but they obviously heard because they did trigger the switch as they were instructed to. You will hear them picking up telemetry any minute now

and calling it as TM solid, that is what they usually get. They have been getting solid telemetry almost every pass.

Guaymas Guaymas has solid TM. All systems are go.

Flight Roger. Guaymas, do you have your air to ground pass to Goddard.

Guaymas Roger. He never made a reply.

Flight Good. How does it look.

Guaymas Everything looks good on the ground, Flight.

Flight Very good.

That was Flight Director John Hodge requiring how they look. They look good and they have looked good all night. Still awaiting word from the crew. They should be getting ready now to do the shirt-sleeve evaluation. That's where they turn off one of the oxygen inlets and stow the outlets so they can have only 50 perdent environment, oxygen flow into the spacecraft. It is a test and Cap Com here, Charlie Bassett is about to talk to the crew let's tune in on them.

Cap Com Okay.

Cap Com Gemini 7, Houston.

S/C Hello Houston.

Cap Com Hello again. I'd like to find out how much high speed black and white film you have onboard.

S/C Same as we gave you last night Charlie. Did you copy last nights. We can look it up and find it.

Cap Com Negative, that's okay. We'll say that it is the same. I have a purge procedure for you.

S/C It's 13 exposures Charlie.

Cap Com 13, thank you. I have a purge procedure for you.

S/C Wait just a minute, we are right in the middle of the cabin survey, temperature survey.

Cap Com Okay, we'll be standing by for your mark to start.

S/C Okay, the quantitative evaluation -- we've got the red hose in my leg well and Jim's hose shut off and Jim's temperature is about the same as mine but he notices a little lack of circulation.

Cap Com Gemini 7, understand.

S/C We've got temperature measurements, we've drawn pictures, we've gotten quantitative descriptions, I hope we are getting everything they want. We've been doing it for about 4 days so I think we've got it covered.

Cap Com I'm sure you have Frank. Thank you.
We have a short flight plan update and this purge procedure and we would like to have some quantitative evaluation of what you think you can do in experiments today. I'd like to start off with this purge procedure when it is convenient for you.

S/C Okay, Jim's ready.

Cap Com Okay, place the crossover on and start a normal purge of section 1.

S/C Roger.

Cap Com Place your TM switch to command.

S/C TM to command and crossover on and normal purge of section 1.

Cap Com And C-band adapter switch, command.

S/C C-band adapter command.

Cap Com Cryogenic gauging switch to ECS 02.

Cap Com Cryogenic gauging to fuel cell 02.

Cap Com Cryogenic gauging switch to off.

The Cap Com, Charlie Bassett, we learned last night was promoted by the Air Force to the rank of Major.

S/C We are wondering about -- if we ate the meal C twice, evidentially, I think that we had meal C, day 10 last night and the other one must have been logged wrong, they can, I think, determine it by checking back on the other meal C's we've eaten. Some of these meals are logged on the tape that surrounds them and it gets them off when we take them off.

Cap Com Roger, that's okay.

S/C You want to go ahead, I can copy now.

Cap Com Okay, I'll give you your flight plan update. They are all deletions, Frank, for cloud cover and equipment failure. First title is MSC-4, at 306 11 39, delete for cloud cover, the other is S/8-D/13, time 307 48 37, delete for cloud cover.

S/C Charlie, you are coming in very weak.

Cap Com Roger. The second item is an S-8/D-13 at 307 48 37, delete please. And place fuel cell control number 2 circuit breaker on.

S/C Roger.

Cap Com Request normal purge of section 2.

S/C Normal purge of section 2, roger.

Cap Com Third item in the flight plan update is MSC-4 at 308 12 30, delete for equipment failure.

S/C Charlie, we can't read you.

Cap Com Roger, do you read me now Frank.

S/C Negative, just barely. They did some switching and now you are coming in very very weak.

Cap Com Gemini 7, Houston. How do you read now.

S/C Better now, go ahead.

Cap Com Roger, did you get the second and third items on the flight plan update.

S/C I didn't even get the first one.

Cap Com Roger. The first item is the MSC-4 at 306 11 39.

S/C You cut out again Charlie. Say again please.

Cap Com 306 11 39, MSC-4, delete.

Grand Turk Acquisition Grand Turk.

S/C Is that because of clouds.

Cap Com That's affirmative. Second item S-8/D-13 at 307 48 37, same problem.

S/C Roger.

Cap Com Third deletion is MSC-4 at 308 12 30, this is equipment failure.

S/C Understand, equipment failure.

Cap Com There is a general remark to the experiments Frank. We only will attempt to provide you with the information, you are the best judge of whether you can do it or not. We do feel, however, that of primary importance is the D-4/D-7 sun measurement and the S-8/D-13 window measurement.

S/C Okay.

Cap Com If you think there are other experiments of another nature that you feel you could do, we'd be happy to know about it and work up information for you in this line.

S/C The only thing we are short on is OAMS fuel, Charlie.

Cap Com Okay, thank you very much Frank.

S/C Rog. Second Section purge complete.

Cap Com Roger. Next item on the purge is fuel cell control number 2 circuit breaker off.

S/C It's off.

Cap Com Crossover off.

S/C It's off.

Cap Com And place the voltmeter select momentarily to 2A and 2C positions, then back to C. Give readouts on 2A and 2C. We'd like those voltage.

S/C Roger, 2A and 2C are zero.

Cap Com Understand. Have you been using any thruster activity this morning?

S/C Roger.

Cap Com How were your rates during the night.

S/C We went BEF through the nightside to get a good check the stars for retro.

Cap Com Roger.
Gemini 7 has just begun its 1191st revolution.

Cap Com Gemini 7, Houston. Could you give us an onboard propellant quantity, please.

S/C Roger, reading 7 percent.

Cap Com Understand, 7 percent.

S/C Roger. Charlie, you said something about D-4/D-7 on the sun, we don't have any of that here, written down yet.

Cap Com That's right. That will be coming up in the afternoon update Frank.

S/C Okay. Looks like D-4/D-7 is coming out high on the hog.

Cap Com Yeah, that's been a real successful experiment.

S/C I wish we could get the MSC-4 going.

Cap Com Yeah, that's been pretty frustrating. By the way Frank, a Navy Commander, J. R. Hunt, sends his best congratulations. He had previously held new world endurance record for unrefueled flight of 264 hours and 14 minutes.

S/C Roger, was that in the .... (garbled)

Cap Com I beg your pardon. That's affirmative, Frank. That was in a lighter than air craft.

S/C Rog.

END OF TAPE

HOU FLIGHT Oh, that's affirmative, Frank. That was in a lighter than aircraft.

S/C Roger.

HOU FLIGHT Frank, this is Houston. We suggest that you could start using up the rest of the film that you've not yet used onboard.

S/C Roger. We've been trying to do that, Charlie. We'll continue to -- we want to get it all used before the day's up.

HOU FLIGHT Very good. The carrier's right underneath you now, Frank; and Wally and Tom are just airborne.

S/C OK. It's cloudy out here now.

HOU FLIGHT Is it. Gemini 7, Houston. Do you think you can do any tracking tasks at all or would you prefer to avoid them completely?

S/C Well, we can try. I'd certainly like to try .... I'd like to know just how much fuel they think they ought to save for this ..... I'd like to save about 5% -- 4 to 5%.

HOU FLIGHT Roger. That's what we've been discussing, and we have arrived at the same figures.

S/C Very good. I'm sure we can do some tracking tests if we set it up properly and do it all in pitch.

HOU FLIGHT Roger, Frank. We'll work on that. Thank you very much.

S/C Roger.

Apparently, that's all we're going to hear from Gemini 7 on this 191st -- beginning of its 191st revolution. They have 25 hours and 9 minutes to go to retrofire. They've been flying in space now for 304 hours and 48 minutes -- more time than all the other Gemini flights put together. This is Gemini Control.

END OF TAPE

This is Gemini Control. 305 hours, 6 minutes into the flight of Gemini 7 on its 191st revolution. During its pass across the United States a while ago, you probably heard Cap Com, Astronaut Charles Bassett, talking to the flight crew about their flight plan; advising them that they had to delete the MSC 4 experiment, this is the Laser communication experiment, twice on their flight plan, once because of clouds and once because of equipment failure. We've learned that the equipment failure is at Ascension; the clouds are at White Sands, New Mexico. However, they will get a try, we hope, at the Laser experiment at approximately 9:05 a.m. Central Standard Time over the Hawaii Station. Right now, the spacecraft is crossing over Africa and has been absolutely no communication between the spacecraft and the ground stations. Just before leaving the Bermuda Station, however, there was some brief conversation between the crew and the ground station at Bermuda; and here is the tape of that conversation.

HOUSTON Gemini 7, Houston. Gemini 7, Houston.

S/C 7 Go ahead.

HOUSTON Surgeon would like to know if you've finished your breakfast and have updated water data.

S/C 7 Roger. We've finished our breakfast, except Jim Daddy ate all the gingerbread, and I only ate 2 of them.

HOUSTON Roger. And, do you have the water count, please?

S/C 7 Roger. Stand by. We're looking it up.

HOUSTON We would like very much to get any of the micro-meteoroid data that you could from the dim light phenomena photographs. We would like to get any information available from the dim light photographs on the micro-meteoroid section.

GRAND TURK LOS, Grand Turk.

HOUSTON Bermuda go remote.

BERMUDA Bermuda is remote.

HOUSTON Gemini 7, Houston.

S/C 7 Go ahead.

HOUSTON Referring to the dim light phenomena in your flight plan, we would like to get micro-meteoroid information.

S/C 7 We've already made passes; our entire night pass was on it.

HOUSTON Very fine. Very fine. Thank you very much.

S/C 7 ...(Garble)...

This is Gemini Control. The spacecraft is out of touch with any ground station right now. When we have some more communication, we'll get back to you. At 305 hours and 9 minutes into the mission, Gemini Control.

END OF TAPE

Gemini Control here at 305 hours and 20 minutes into the flight of Gemini 7. Chris Kraft's Red Team is just coming into the Mission Control Center and are now briefing John Hodge's Blue Team before they go off after their night shift. Right now Gemini 7 is in contact with Tananarive. There was only a very small exchange there. Gemini 7 told the Cap Com, Charlie Bassett, that he had completed his S8-D13. This apparently is what they were doing when we did not get any communication from them over the Canaries. To go back into the "go" -- the "go" was given by Flight Director John Hodge, Blue Team Flight Director, at 4:43:30 this morning CST over Bermuda. They gave the crew a "go"for 206 revolutions. This means they would come back into the recovery area at the beginning of the 207th revolution -- that's 207-1. They would splash into the Atlantic Ocean hopefully near the aircraft carrier WASP at 140510 Greenwich which comes out 8:05 tomorrow morning Central Time. At 305 hours, 21 minutes into the flight of Gemini 7, this is Gemini Control.

END OF TAPE

This is Gemini Control at 305 hours, 30 minutes...31 minutes into the flight of Gemini 7 on its 191st revolution exactly opposite us on the other side of the World, Carnarvon. I've got some information here on the Gemini 6 crew, which is now on its way to Bermuda from the aircraft carrier, WASP, aboard what the Navy calls COD aircraft. They're Grumman, twin engine airplanes. Wally Shirra is flying co-pilot aboard aircraft 755. His pilot is Lt. Commander Richard M. Weinfield of Quincy, Massachusetts. Tom Stafford is flying co-pilot in another Grumman aircraft, same type, number 763; and his pilot is Lt. J.G. W. T. Parker from the Norfolk area in Virginia. They should arrive in Bermuda about 9:00 this morning, Central Time and get aboard a C-140, that's a Jet Star, to be flown by Major Joe Alford and Major Stanley Galloway of the Air Force's 1254 Air Transport Wing at Andrew Air Force Base, Virginia. They're due to arrive at Cape Kennedy about 1:00 p.m. Eastern Standard Time; or between 12:30 and 1:00 p.m. Eastern Standard Time. And, while Wally and Tom are airborne, Gemini 7 is spaceborne over Carnarvon on its 191st revolution at 305 hours and 32 minutes into its flight. This is Gemini Control.

END OF TAPE

This is Gemini Control. 305 hours, 52 minutes into the flight of Gemini 7, now crossing Canton Island on its 191st revolution. We have just a little over 24 hours until splash time tomorrow morning. The U.S. Weather Bureau Space Flight Meteorology Group said this morning that weather conditions will remain favorable in the areas of primary concern for the final day of Gemini 7's flight. The Western Atlantic area, centered about 600 miles east of Miami, is located in an area of high pressure and good weather will prevail for the end of the mission tomorrow. Scattered clouds are expected; winds of about 10 knots; seas 1 to 3 feet with a 75 degree temperature. In the Eastern Atlantic landing zone, centered about 500 miles north of the Cape Verde Islands, skies will be partly cloudy. Winds east at about 15 knots, and 4 to 5 foot seas. In the Mid-Pacific landing zone, about 800 miles northeast of Honolulu, skies will be partly cloudy with northeast winds at 15 knots and seas 5 feet. Strong northerly winds in the Western Pacific landing zone, centered about 700 miles south, southwest of Tokyo. Our building area is up to at least 15 feet. More favorable weather conditions along these revolutions existed contingency points near longitude 165 degrees west in the Central Pacific. At these contingency points, skies will be partly cloudy, winds east 15 to 20 knots, seas 3 to 5 feet. And, at 305 hours, 53 minutes, 28 seconds into the flight of Gemini 7, this is Gemini Control.

END OF TAPE

This is Gemini Control 306 hours and 8 minutes into the flight of Gemini 7 now approaching the west coast of the United States on the end of its 191st revolution. Gemini 7 has been fairly quiet since leaving the United States the last time about an hour and a half ago. While the Gemini 7 crew is approaching the west coast of the United States, the Gemini 6 crew is approaching Bermuda from the aircraft carrier WASP aboard two Navy aircraft. Right now the Red Team is firmly seated here in Mission Control and the Blue Team is on its way over to Building 6 for its morning press conference. And at 306 hours and 9 minutes into the flight, this is Gemini Control.

END OF TAPE

This is Gemini Control, 306 hours 35 minutes into the flight of Gemini 7, and exactly 24 hours from splashdown tomorrow morning at the end of Rev 206, beginning of Rev 207. We just completed a Stateside pass where the crew gave the status of their fuel cells and there was a lot of active conversation in that pass. Let's play that tape for you now.

Guaymas — Gemini 7, Guaymas Cap Com. Everything is looking good here on the ground. We will be standing by if you need us.

S/C — Thank you Guaymas, Gemini 7 here.

Cap Com — Gemini 7, Houston, Gemini 7, Houston.

S/C — Hi there Houston. How are you.

Cap Com — Just fine. You sound very cheerful.

S/C — Did you sleep very well last night.

Cap Com — Yeah, and I'm drinking enough water too.

S/C — Okay, just wanted to check.

Cap Com — How about you.

S/C — Very good.

Cap Com — I have an excellent weather report for you in 207-1. It's looking very good. Just couldn't be better. They had the same thing yesterday for Gemini 6.

S/C — Very good.

S/C — Gosh, I hope there ... (garble) ... 5 feet high for Frank.

Cap Com — I would like to find out if you feel your stowage is going to be nominal for retrofire. We are trying to pin that down as accurately as we can.

S/C — Yes, I think, we ran through it last night. It will be nominal for retrofire.

Cap Com — Roger, and has anyone asked you how much time you feel we should allow you for completing your stowage.

S/C — I think we can do it all in an hour Elliot, easy.

Cap Com — Okay, we'll give you a lot more than that. Just wanted to make sure. I'd like to check with you on this shirt sleeve environment evaluation, make sure you completely understand that. Did you get the three sets of readings yesterday. We copied down the first set from you but we did not get the other two sets.

S/C — Roger, we've got a whole - about 15 pages on a blank book here on cabin temperature survey.

Cap Com — Very good. And do you understand that we want the same sets of readings taken today with this configuration you have now.

S/C — There is 30- some minutes.

Cap Com — Say again.

S/C — We evaluated the temp flows off and the two red hoses in my foot well for 30 some minutes this morning and then ran the cabin fan and noted the circulation, and we have drawn pictures and I think we've got it pretty well covered.

Cap Com — Okay, does that mean then, that you have gone back to your previous configuration.

S/C — That's affirmative.

Cap Com — Did you go back because you did not find this other one comfortable or because you just didn't want to fool with it anymore.

S/C — Well, there are several considerations. One is it makes Jim's hose right over all the switches and the amp controller, the second is running the cabin fan really bumps up the amps, and the point is, we were very comfortable the way we were, so we ran it for 30 minutes the other way and wrote down our impressions and then went back the way we were.

Cap Com Okay, did you take some readings with this other configuration also.

S/C Roger, we have a series of readings with the other configuration.

Cap Com Okay, that sounds very complete.

S/C Strangely enough, with both hoses on my side, the temperature doesn't vary much, the only thing, Jim noticed was a little stuffiness, not quite as much circulation, but the temperature is about the same.

Cap Com Roger. Okay, I have a brief flight plan update here when you are ready to copy.

S/C Roger, we're getting out the book. Go ahead please.

Cap Cap S-5, 306 47 46, mode 02, pitch 33 degrees down, yaw 90 degrees right. S-5, 308 23 25, mode 02, pitch 34 degrees down, yaw 90 degrees left. Did you copy that all right.

S/C Roger, Elliot.

Cap Com Okay, let me explain this now. These are both essentially trying to get the same picture, it is the Kalahari Desert area in Africa and neither of these revs is very good for this picture. They essentially just straddle it, it's probably not going to be too good a picture but we are just trying to get the best we can and you essentially have a choice of these two. In other words, if you get it successfully on the first one, then you can skip the second one, or vice versa, so essentially we are after 1 good picture, at least as good as you can get it, even though that one is marginal, and considering that, we'd like you to take the fuel required into consideration also and not try to expend very much fuel on this if the first try is difficult to get

from a fuel standpoint, then wait for the second one.

S/C Roger, we are still reading 7 percent on the fuel so we'll have a go at it.

Cap Com Roger. On the reentry yesterday, we plan to get some more briefing on this later today, but I'll just tell you some about it right now. Wally had a very good mark on his downrange and it looks like he was extremely close on it. Crossrange still seems to be -- some question about it. He was following the needle and it was telling him to go to the right and he ended up to the right. We are trying to pin that one down a little bit better. We are going to give you some briefing on anything that he might have to pass on to you from that. Also, I would like to say as soon as you come out of blackout, in other words, when you finished your reentry steering, guidance steering, we want you to tell us how you ended up. What it looks like to you as far as how you are going to land, that is, downrange and crossrange. That will help us know -- in the recovery efforts to try to get to you as quickly as possible.

S/C Okay. How far off from the carrier was Wally and Tom?

Cap Com They were 2 miles long and 11 miles to the right.

S/C Okay, fine, ... (garble) on that.

Cap Com Say again.

S/C I say I got to get the accurate figures because I've got a lot riding on that.

Cap Com Okay. Well, we are trying to pin it down better ourselves and understand it better also. We are having difficulty understanding this cross range error.

S/C Roger.

Cap Com We tried to look for you again this morning but it was overcast so we haven't had a chance to see you yet.

S/C Roger, not very many more chances.

Cap Com Yeah, just one more.

Flight Good morning Gemini 7.

S/C Good morning Mr. Kraft.

Flight The fuel cell performance is --

END OF TAPE

S/C 7 Roger. Not many more chances?

HOUSTON Yea. Just one more. Good morning, Gemini 7.

S/C 7 Morning, Mr. Kraft.

HOUSTON The fuel cell performance is still excellent.

S/C 7 Looks like it from here, too. Jim and I were just talking last night. In all the briefings and everything on the fuel cell before the flight, the tralando was never purged with the Delta P light on.

HOUSTON Roger.

S/C 7 But, your auxil are doing real good.

HOUSTON Talked to Marilyn and Sue last night. They're in good shape.

S/C 7 Say again.

HOUSTON Talked to Marilyn and Sue last night. They're in good shape.

S/C 7 Is Marilyn still expecting?

HOUSTON Affirmative. You'll be the first to know if she's not.

S/C 7 Drag out the 15 food.

HOUSTON Gemini 7, this is Surgeon. She said to tell you that we had a little bit of a scare the other night, but it didn't amount to anything, and she's sorry she couldn't deliver.

S/C 7 Well, that's the way it goes.

HOUSTON Seven, I have another flight plan update that just came in here.

S/C 7 Okay. Stand by. Go ahead.

HOUSTON Dim light 308:35:15. Sequence 03. Mode 01. Post sunset. Dim light 308:40:00. Sequence 02. Clouds, no moon. Dim light, 308:50:00. Sequence 03. Mode 03. South horizon. Use 120 second exposure in place of 10 second. Dim light 309:05:00. Sequence 03.

S/C 7 Elliot, we can't read you.

HOUSTON Where'd you loose me?

S/C 7 We can't read you at all.

HOUSTON Where did you loose me?

S/C 7 We didn't even get started with you.

HOUSTON Roger. How do you read me now?

S/C 7 You're loud and clear now.

HOUSTON Okay. Let's try again. Dim light 308:35:15. You reading okay?

S/C 7 Roger. Loud and clear.

HOUSTON Sequence 03. Mode 01. Post sunset. Dim light 308:40:00. Sequence 02. Mode ...correction, no mode on that. Clouds, no moon. Dim light 308:50:00. Sequence 03. Mode 03. South horizon. Use 120 second exposure instead of 10 second. Dim light 309:05:00. Sequence 03. Mode 05. Pre sunrise. Start time is 3 minutes prior to sunrise. And, have a general comment. Do not go beyond 40 frames total on high speed black and white. Do you copy?

S/C 7 Roger, Elliot. I don't think we're going to have the fuel to do all that.

HOUSTON Okay. That's up..Just play it accordingly with your fuel cut off that we've given you.

S/C 7 Okay. Fine. It's right...It's bouncing right between 6 and 7% and we notice inaccuracy in this needle. But, we'd like to keep using it until cut off.

HOUSTON Roger. Gemini 7, this is Houston. We'd like to concur or confirm with you that you have a cutoff figure for today of 5%.

S/C 7 That's right 5%; and right now we're bouncing around 6 or 7.

HOUSTON Roger. Gemini 7, this is Surgeon. Frank, do you have any lotion remaining?

S/C 7 Dry skin lotion?

HOUSTON Roger.

S/C 7 We have some; but we still don't need it. We're as greasy as can be.

HOUSTON Wonderful. Have you had any air plugging at all with the oxygen?

S/C 7 Roger. When you're asleep and when you wake up, you have to clear your ears just the same as you do when you fly on the ground. I was surprised at this. I didn't think we'd notice that after 13 or 14 days.

HOUSTON Roger. Frank, you might consider re-entry tomorrow morning. You guys think about it today with your sleep and evaluate your own fatigue state so we can get a reading on it early tomorrow morning and think about whether you're going to want to do anything with this dexadrine or not.

S/C 7 I don't know if I could stay in this cockpit with Jim after I give him one of those pills.

HOUSTON That's the spirit. We haven't got any calmers up there.

S/C 7 Did Pete take one?

HOUSTON You say did Pete? That's affirmative.

S/C 7 I guess if he can lump it, then anybody can.

HOUSTON He sounded like he was ready to jump out of the cockput, though.

S/C 7 Listen, I'll tell you, we both are ready to jump out of this cockpit.

HOUSTON Roger that.

S/C 7 Tell him we're facing the formalities of going aboard ship now.

HOUSTON Very good. Just get him to tell you how to fly a roger pass.

S/C 7 A roger pass?

HOUSTON Affirmative.

S/C 7 We have attached number 3 wire.

HOUSTON There you go.

END OF TAPE

This is Gemini Control. The spacecraft is on its 192nd revolution having just passed Tananarive on the 62nd anniversary of the Wright Brothers first flight back in 1903. The Wright Brothers flew four times that first day, the first time by Orville Wright and the longest flight that day was by Wilbur Wright and he flew for 59 seconds. So far, we have been flying in space 306 hours and 58 minutes and let's play a tape of that Tananarive pass.

Cap Com Gemini 7, Houston. How do you read.

S/C Loud and clear Houston.

Cap Com Roger, I have a slight update on your MSC-4 time. Are you ready to copy?

S/C Just a minute. Go ahead, please

Cap Com The time is 307 34 30. Do you copy.

S/C 307 34 30.

Cap Com Roger. We are continuing to check the weather. It is variable. It changes rapidly the Hawaii Cap Com tells us, so we are going to keep you posted on it at Carnarvon and Canton, and than again at Hawaii and we will cancel you out at the last minute if the weather goes bad, otherwise plan on it.

S/C Roger, thank you. We will be all ready, we are going to start attitude control early and be ready for you anyway.

Cap Com Roger, Frank. Gemini 7, Houston.

S/C Go Houston.

Cap Com We are considering asking you to set up this alternate circulation - shirt sleeve circulation in the cabin for a longer period than 30 minutes. What do you think about that.

S/C I don't mind doing it, I don't like to use the suit fan -- or the cabin fan any longer than I have to, Elliot.

Cap Com Roger. Well, the evaluation just calls for evaluation with the cabin fan on and off -- that does not mean you have to run it for a very very long time.

S/C We'll do it if you want us to. We both feel we have ample data now, 30 minutes, and we can tell you exactly what it feels like.

Cap Com Okay, well, we were wondering about this stagnation that Jim reported, whether that might tend to clear up in a little longer time, or can you confirm that it would definitely just be that bad or get worse.

S/C Houston, when you put both the exhaust hoses over on one side and have the other hoses up above, the circulation goes to one side and you get a stagnant area. The best thing to have circulation in the cockpit is to have an exhaust hose on either side and that's the way we have it right now.

Cap Com Roger. Do you think the cabin fan would improve that situation or really not particularly help that. You just have to have the exhaust on each side.

S/C The cabin fan definitely improves that situation, when we turned the fan on, we get a lot of circulation on both sides, however, the fan uses electricity and that is why we are reluctant to use it.

Cap Com Say again the last sentence.

S/C The fan helps considerably, however it uses electricity, that's why we are reluctant to use it.

Cap Com Roger, Jim. Good luck on the Laser guys.

S/C Okay, Elliot, thanks a lot.

Cap Com Gemini 7, Houston.

S/C Go ahead.

Cap Com We were trying to check on what your main battery voltages were on the go--no-go this morning and it is not recorded. It just says Okay. Do you remember what the voltage was, or would you check them now.

S/C Roger, they are .... (garble) before they were around 22.5.

Cap Com 22.5, roger.

Tananarive Tananarive has LOS.

END OF TAPE

This is Gemini Control Houston, 307 hours, 36 minutes into the flight. The spacecraft is up in the Hawaiian area now and due to weather, we've been forced to cancel that Laser experiment that had been planned. It's rainy, it's cloudy over the station at Hawaii. First, let's listen to the conversation at Carnarvon.

CRO All systems are go on the ground.

CRO Gemini 7, Carnarvon.

S/C Go ahead Carnarvon, 7 here.

CRO Roger, the MSC-4 is no go at this time at Hawaii due to weather. Houston will update you again over Canton. We have your PM on the ground, you're looking real good. We'll be standing by.

S/C Sorry to hear that, but we'll be standing by for the weather at Canton .

CRO Roger.

HOU FLIGHT We want to make sure they're prepared for the MSC experiment -- MSC 4 experiment on this pass.

CRO Roger flight. Also, you're to be prepared for MSC-4 experiment this pass. You copy, 7?

S/C Go ahead.

CRO Be prepared for the MSC-4 in case of weather change

S/C Roger.

CRO We have C-Band track.

HOU FLIGHT Tell them we've just checked the data again on

U FLIGHT where they picked up the spacecraft for their betting information. It's two miles long, 12 miles right.

CRO That's two miles long and 12 miles right. Is that affirm.

HOU FLIGHT That's affirm. Also, tell him I think he's going to have trouble collecting.

CRO Gemini 7, Carnarvon, we have just been advised from Houston they've checked the landing points for GT-6, it's two miles long and 12 miles right and flight advises that he thinks you're going to have trouble collecting.

S/C No strain, tell flight.

CRO Rog. Copy flight?

HOU FLIGHT Affirmative.

CRO Flight, Carnarvon, two Baker reads 3.55.

HOU FLIGHT Roger that.

CRO Just powered up his ACME and he's in pulse mode and we're staying the same thruster activity flight.

HOU FLIGHT Roger.

S/C Carnarvon, send us another main please.

CRO Roger, coming on your way.

AFD Carnarvon, AFD

CRO Go ahead, AFD.

AFD It looks like the MSC-4 is no go. It's raining at Hawaii. So you can inform the crew.

CRO Roger.

GT-7, Carnarvon.

S/C Go ahead Carnarvon.

CRO Okay, MSC-4 is no go at Hawaii. It is raining.

S/C Righto, thank you.

CRO They have just powered down.

HOU FLIGHT Roger

CRO It came off as soon as he had the word.

HOU FLIGHT Roger, we copy.

C... We've had LOS on 7.

This is Gemini Control Houston ..... starting from the top.

HOU Canton go remote.

HOU CAP COM Gemini 7, Gemini 7, Houston.

S/C Hear you loud and clear.

HOU CAP COM Roger, unfortunately the weather at Hawaii is still bad. We're pretty well shot down for this rev. We'll continue to watch for another one.

S/C Roger...(garble)....

HOU CAP COM Gemini 7, Houston. We're going to work on the HF now. Get some music going on the HF. You should have it fairly soon.

HAW Flight, Hawaii

HOU FLIGHT Go ahead, Hawaii.

HAW Okay, disregard.

HOU FLIGHT Go ahead, I'm listening.

HAW Disregard, we didn't have a solid lock at that time, we showed only one light, now we're showing two.

HOU FLIGHT Roger.

HAW Gemini 7, Hawaii Cap Com

S/C Go ahead, Hawaii.

HAW How are you doing?

S/C Fine. I understand it's raining down there.

HAW Just like always.

S/C Too bad.

HAW Okay, we're showing you go down here. Just a question, did one of your Delta P lights go out between Carnarvon and here?

S/C Negative, they're both on.

HAW Okay, very good.
Quit pouring water down on top of us.

S/C Inside dump.

HAW One more day, and you'll be able to go back to sunny Houston.

S/C Do I have to?

\W That's what we figured.

S/C Maybe I could play the red team, you know a good sailor never gets separated from his baggage.

HAW Righto. Do you hear that music on HF?

S/C Roger. I think they're playing that song for the troops on the RKV.

HAW Right. CSQ had a rough go of it last night.

S/C Yeah, that little ship she just bounces and bobs.

HAW Did you see it when you went over?

S/C No, we just talked to them.

HAW Okay. Looks like you're holding up real well down here. We'll be standing by if you need anything.

S/C Thank you.

HOU FLIGHT How does he look out there Hawaii?

HAW Looks real good flight. Do you want the readouts on those stacks?

HOU FLIGHT No, that's all right, we have your summary.

HAW Okay. Sounds good, sounds like he's in real good shape.

HOU FLIGHT Roger that.

HAW How are you today?

..OU FLIGHT Just great.

HAW Very good.

HAW — You don't have any procedures for stopping rain do you flight?

HOU FLIGHT — Yeah, time.

HAW — Time? I was just rubbing this little idol I've got on my console, that's not doing too well.

HOU FLIGHT — Well, I've got a few letters from a rain maker. I've never gotten any from the guys that know how to stop it.

HAW — Send out a plea for help.

HOU CAP COM — Get those hula girls out there to do some dancing around.

[illegible] — When do I get to look at them?

HOU CAP COM — Come on Ed.

HAW — .....are holding up real well.

HOU CAP COM — Say again, Hawaii.

HAW — The stacks are holding right in there flight.

HOU CAP — Rog.

HOU — LOS all systems at Hawaii.

This is Gemini Control Houston. The capsule communicator was complaining about how little opportunity he was having to take in some of Hawaii's more prominent sights.is Ed Fendell. We've got California should acquire here momentarily. We'd like to follow this pass live ross the states. Guaymas has advised 7 they're standing.....

END OF TAPE

The only action Guaymas has advised 7 they're standing by. They are to turn off a bio-med recorder #2 during the eastern portion of this pass. No other activities in the flight plan itself. Later in the pass, over Tananarive, they are to do the S-5 terrain photography experiment again. They're piling up quite a lot of movie and still footage of the weather and terrain photography. And, over Carnarvon, they're to do some more dim light operational photography experiments, over the Indian Ocean leading into Carnarvon. At Carnarvon, they'll do a fuel cell purge. The flight plan shows more dim light work in the night pass on this next rev between Carnarvon and Hawaii. And, the next time over the States, the D-4, D-7, is laid on east of Hawaii. That's the radiometric measurements taken with a sentry that protudes from the adapter some 4 to 6 inches. Still no conversation. The spacecraft right now is over Baja, California. Texas has been remoted. And, it's 16 minuts after the hour. Texas has acquisition. We're..Elliot See now is putting in a call, and let's tune in there live.

S/C 7 Go ahead.

HOUSTON Node 308:54:39. Rev. 193. 139.6 degrees east. Right ascension 7-26-45. D-4, D-7. 309:22:00. Sequence 432. Mode 02. Do this over Texas; that is when we have acquisition. 309:39:00, begin working on stowage. 310:03:00, cabin temp survey. 310:44:00, crew status report on the command pilot at Hawaii. 311:16:00, crew status report on the pilot at RKV. Do you copy?

S/C 7 We copy. We'd like to change one thing. Do the cabin temp before we start the stowage, because the thermometer stows in the bottom part of the spacecraft.

HOUSTON Roger. Go ahead and do that.

S/C 7 Okay.

HOUSTON This stowage time is really just to get you started on it. We realize that there'll be a few items that you'll have to finish

up at a different time.

S/C 7 Well, we..uh..the center bracket on our stowage was sprung during launch, and it's very difficult to close it. We have to try it and everything else, so once we get it locked; we don't want to get back in it again.

HOUSTON Roger. MSC 2 and 3, 311:16:00. Sequence 03...correction...that's mode 03, or 04, whichever is easier. That will be done at the RKV. 312:17:00, flight plan report. 312:50:00, fuel cell purge and PLA update at the RKV. TX coming up. 313:10:00, bio-med recorder #2 continuous. 323:16:00, bio-med recorder #2 off. 324:02:00, fuel cell purge at Antigua. Do you copy?

S/C 7 Roger. We have all that. Roger, Houston. We read.

HOUSTON We show your Section One Delta P light out.

S/C 7 We confirm; it went out.

HOUSTON Very good.

S/C 7 Can you give me some information on how you want to power up for the platform alignment tomorrow?

HOUSTON We'll be getting that to you. We haven't got that ready yet, Gemini 7.

S/C 7 Thank you.

HOUSTON In the news today, there was quite a bit of write up on Gemini 6 and 7. We think you're pretty well up to date on that. One other item on the news here.I'd like to read you. It's a quotation. "It's too late to mail early, so please mail now. Reports from around the country indicate the public is waiting longer than it should to mail Christmas gifts and greetings." Signed Postmaster General, Lawerence F. O'Brien.

S/C 7 I have a stack of stuff up here, but I can't find a post office.

HOUSTON Outstanding. Texas local. Should have sent it down with Gemini 6.

S/C 7 Roger.

HOUSTON As a matter of fact, we're hoping to have films shown in the Center today of the GT-6 pictures that they took of you. We're really looking forward to seeing those.

S/C 7 Check our retro-rockets, will you?

HOUSTON Roger, 7. Copy that. We hope we can't see them, because the adapter section, of course, will be in the way.

S/C 7 Yea, I know. I hope you can't see it too. There ought to be some fantastic shots, I'll tell you that.

HOUSTON Roger that.

END OF TAPE

This is Gemini Control Houston. A spot of dead air here. Elliot is getting together some more notes. I think there will be additional conversation. We've still got, probably 1500 miles to go before they will be out of the Antigua circle.

Cap Com Gemini 7, Houston.

S/C Rog, Houston.

Cap Com Yesterday, during the recovery, they had live television pictures of Gemini 6 coming on the carrier and they were relayed by a satellite. They were really good pictures. Wally and Tom looked very fresh and looked like they had just been up for a local flight in a T38.

S/C That's all they have been, for crying out loud.

S/C A couple of short timers.

Cap Com Roger that.

S/C Have the doctors noticed any dropout in my TM, Elliot. I just found the connector off.

Cap Com Stand by. No, they look real good.

S/C .... (garble) ....

S/C We're right over Pete Saver Island.

Cap Com Roger that.

GBI LOS, GBI.

This is Gemini Control. That apparently wraps up the conversation on this pass. We've still got a few minutes out of Antigua but I don't think we are going to have any more conversation. At 308 hours into the mission this is Gemini Control Houston.

END OF TAPE

This is Gemini Control, Houston. 308 hours, 51 minutes into the flight. Here's a word or two regarding the film which has been brought back, taken aboard the 6 spacecraft of 7. We've had our first look at 135 feet of the onboard color movie film this morning. It is remarkably clear. The quality is comparable to that of the space walk film, from GT-4. We are presently...We also have some 70mm pictures; and they are being printed right now for selected frame in black and white; will be available at 11:00 a.m., Houston time in the Building 6 News Center. These are pictures taken from 6 of the 7 spacecraft at varying distances. At noon, we will have color transparencies of those four frames in a quantity of 29 each; that's the 70mm stills, in color. At 1:30, we expect to have 30 copies of the movie footage, 135 feet available; 30 copies total. At 11:00 this morning, we will have a press screening of the 135 feet in the Building 6 News Center Auditorium. Mr. Charles Mathews will be there to comment on the..uh.. this remarkable photography taken from Gemini 6. Right now, the Gemini 7 spacecraft is northeast of Carnarvon; and we have some tape conversation that went on while passing north of the Carnarvon Station. Here it is.

CRO Gemini 7, Carnarvon.

S/C 7 This is 7, Carnarvon.

CRO Okay. You're scheduled for a normal fuel cell purge. You can start it whenever you like.

S/C 7 Roger. Starting now with the first section.

CRO Roge. We have C-Band track.

HOUSTON Roger.

S/C 7 Our Delta P light on the first section, by the way, has come back on.

CRO Roger. Copy.

HOUSTON That was before the purge, wasn't it?

CRO That was prior to the purge the Delta P light came on. Is that affirmed?

S/C 7 Roger. It went off just before we passed the States, and it went on just about 10 minutes ago.

CRO Roger. Copy. Everything looks good, Flight.

HOUSTON Roger.

S/C 7 Purge complete, Carnarvon.

CRO Roger. Can you position your cryo switch to the ECS 02, please.

S/C 7 Roger.

CRO Okay, position the fuel cell 02, please.

S/C 7 Roge.

CRO Okay, fuel cell H2, please.

S/C 7 H2.

CRO Okay, you can position it to off. Okay, you're looking real good down here on the ground. That's the last pass for the afternoon, so we'll be seeing you tomorrow; and we'll be standing by.

S/C 7 Roger. Thank you, Carnarvon.

CRO Did you get our summaries, Flight?

HOUSTON Affirmative.

CRO Okay. He's still looking good here on the ground. We'll have summation for you here in just a second. We've had LOS, Flight.

HOUSTON Roger.

END OF TAPE

This is Gemini Control, Houston. 309 hours, 15 minutes into the mission. Seven is now east of Hawaii. There was no conversation over Hawaii. The ground read out the systems. They were all go. And, they simply advised 7, we are standing by. Meanwhile, in the last 10 minutes, here in the Control Center, we've set up...we set up a screen and did a special...had a special screening of the film that you will see in the News Center in about 15 minutes. The film on completion got a standing ovation from all the flight controllers in our jammed packed viewing room behind the glass here overlooking the floor. This remarkable color photography of the two spacecraft will be on display in the News Center at 11:00. The gentlemen with the film are leaving the building right now. At 309 hours, 16 minutes into the mission, this is Gemini Control, Houston.

END OF TAPE

This is Gemini Control, Houston. 309 hours, 21 minutes into the flight, and 7 right now is over Baja, California. The pilots are going through their final D-4, D-7 radiometric experiment. They will turn...They will position their spacecraft and that radiometric sensor which gets an infra-red signature on the sun. This will have the effect of burning the sensor out. There's only a very short amount of time left on the tape, and this is the normal way to conclude the experiment; by getting an infra-red signature on the sun in the last bit of tape available. No conversation yet, between the ground and the spacecraft as we're coming across the States. It'll probably be the extreme eastern portion before we get any. Everything is go on the ground and in the 7 spacecraft. This is Gemini Control, Houston.

END OF TAPE

This is Zack Strickland with the Kennedy Space Center Public Information Office, reporting from the skid strip at Cape Kennedy. The C-140 Jet Star aircraft returning astronauts Walter Shirra and Tom Stafford to the point of their origin of their flight on Wednesday, has just landed at the skid strip. There's some 300 people here at this skid strip waiting to greet the returning astronauts. Among them are members of the entire launch operations here at Cape Kennedy representing the Kennedy Space Center, the Air Force Eastern Test Range, the 6555th Aerospace Test Wing, the McDonnell Aircraft Corp., the Martin Co., the General Electric Co., the Burroughs Corp., Aerojet General Corp., Pan American World Airways, and Radio Corp. of America. In addition, there are quite a number of officials from the Kennedy Space Center and the Air Force here waiting to greet astronauts Walter Shirra and Thomas Stafford. Among these are Dr. Kurt H. Debus, who is Director of the Kennedy Space Center; Major General Vincent G. Houston, who is Commander of the Eastern Test Range; G. Merritt Preston, who is Deputy Director of Launch Operations for the Kennedy Space Center; Colonel Otto C. Ledford, Commander of the 6555th Aerospace Test Wing for the U. S. Air Force; Colonel John G. Albert, the Chief of the General Ops Division of the 6555th Aerospace Test Wing; Mr. John Williams, Assistant Director of Spacecraft Operations for the Kennedy Space Center. The Jet Star engines have now been shut down; and we are waiting for the astronauts to come off the airplane. Chief astronaut, Alan B. Shepard has gone aboard to chat briefly with Shirra and Stafford. And, we're waiting, and there's a threshold of some 300-odd people here at the skid strip at Cape Kennedy. Actually, this is the beginning of a very busy day for Wally Shirra and Tom Stafford. Immediately after their arrival here, after lunch, they will begin a rather extensive medical debriefing scheduled to last from about 2:00 until 4:00 o'clock this afternoon. From 4:00 until 4:30, they undergo a count down debriefing. From 4:30 until 5:30, they will be debriefed on powered flight; and from 5:30 until 6:30, they will talk about the insertion phase of their flight. From 6:30 onward, they will undergo a general

debriefing until bed time; and the astronauts are expected to go to bed at a rather early hour. Tomorrow, their day is likewise busy. From 9:00 until 10:30, they'll go for an operation on their....They'll go through a debriefing on their orbital operations prior to rendezvous. From 10:30 until 12:00 noon they undergo a rendezvous debriefing. From 1:00 until 2:00 tomorrow afternoon, they'll talk about the station keeping. From 2:00 until 2:30, they'll do a discussion of separation. From 2:30 until 5:00, all the operations after separation prior to retro-fire. Sunday's a general debriefing, and if all goes well, Wally Shirra and Tom Stafford will leave for Houston. Now they have just emerged from the airplane dressed in their flight suits accompanied by Alan B. Shepard and other dignitaries. Shepard has his arm around Tom Stafford. Both are wearing a big grin. They're in blue flight suits and sneakers. They're now saying hello to Dr. Kurt H. Debus and other members of the visiting...people who are here to greet the returning astronauts. I'm sure you heard the applause in the background as the some 300 people, most of whom are with the launch organization here at Cape Kennedy, said hello to the people they put into orbit on Wednesday morning. They've had a rather busy morning. They left the USS WASP the prime recovery ship at about 7:00 o'clock this morning and landed at Kindley Air Force Base in Bermuda. They left Bermuda about 9:33 this morning on this C-140 Air Force plane, the Jet Star; and now they have just landed here at Cape Kennedy. Shirra and Stafford are now chatting with Jack Albert and Colonel Otto Ledford and Merritt Preston. These are the operational people who had a great responsibility in launching these two astronauts into orbit on Wednesday after a rather frustrating effort on the Sunday prior to that. Tom Stafford is now chatting with Jack Albert as is Wally Shirra. They both look rested and quite happy. Alan Shepard has a big grin on his face, too. Now, you hear the press saying "Over this way". There's Tom Stafford and Wally Shirra coming this way. They wave now to the launch organization who.....

SHIRRA I think while we're here we should first say thanks to the launch crew so they'll have another look at us including getting back to the Center. We had a practice launch; after that, though, we had the most perfect launch we've ever seen. I'm sure you must realize that. The Titan boy did the job for us and the Gemini vehicle, of course, did it's job; and we had a most delightful trip. Thank you all.

STAFFORD About all I can do is just re-emphasize what Wally said. We can't really express our thanks too much for the great support and effort we had from all the people at the Cape who turned around and backed the booster and spacecraft. It was real wonderful and just heartwarming to see all the effort you people put out; and thanks a million for us. We hope you see the pictures real soon.

You just heard Wally Shirra and Tom Stafford express their appreciation to the launch organization. They're laughing now at.... Wally Shirra has just said, "You can quote me" to a question which I failed to catch from the press here. Now they are leaving; ready to get aboard automobiles to go over to Kennedy Space Center, to their crew quarters where they will begin their rather extensive debriefings this afternoon. They are now getting into automobiles; and after a short lunch, beginning at 2:00 o'clock, they will begin the first of their debriefing, which is the medical debriefing. Still waving. Smiling, happy. Weather, almost, was a problem for the return of the astronauts this morning. Earlier in the day, the skid strip here at Cape Kennedy was socked in by weather; and for a period of time, it was unknown whether the astronauts would land here at the skid strip or would be required to go to Patrick for their landing. And, now we see that a representative of the Govenor of Florida, Attorney General Earl Faircloth, is here to greet the astronauts. They have gotten out of their automobile and Attorney General Faircloth is now talking with Wally Shirra and Tom Stafford. Govenor Burns

would have been here in person but for a death in his family, he was unable to attend; and consequently, he designated Attorney General Earl Faircloth as his official representative here. The Attorney General has 2 plaques in his hand. He's presenting both of these to Tom Stafford and Wally Shirra in something of a tradition, which was established by Govenor Burns on our first Gemini manned flight. They're chatting briefly, looking at the plaques, talking with Attorney General Earl Faircloth, representing Florida's Govenor Burns. Attorney General Faircloth also was a victim of the weather. He arrived a little bit late; and now they're coming back over to the microphone... The astronauts Wally and Tom are now in their automobile. They're on route to the MSOB. And, that concludes the report here. Attorney General Faircloth is now....

FAIRCLOTH Ladies and Gentlemen, Govenor Burns has instituted the traditional procedure of, on the return of Gemini astronauts, being here in person to welcome them back to Florida and to present plaques. Today, the Govenor, unfortunately, was unable to be with us due to the death of a new member of his family. He's attending a funeral in Jacksonville....

END OF TAPE

The Governor, unfortunately, was unable to be with us due to the death of a near member of his family. He is attending a funeral in Jacksonville and on his behalf, I'm happy to introduce the Attorney General, Mr. Earl Faircloth.

Thank you so very much, and on behalf of Governor Hayden Burns and the people of the State of Florida, I'm very wonderfully honored to convey the great admiration and gratitude to these young men who have done so much for the World and for our Country and on behalf of the people of Florida, we welcome them back here to Florida soil. Thank you.

This is Gemini Control Houston again. The astronauts safely on the ground and on their way to MILA to start their debriefing in Florida. I think you heard Zac Strickland's report. We are 310 hours hours into the flight of 7. We have some tape backed up from the last Stateside pass. We would like to play that conversation for you now.

Cap Com — Gemini 7, Houston.

S/C — 7 here.

Cap Com — Roger. I realize you are coming up on your D-4 measurement here. Let me know when you need some quiet to do that.

S/C — Rog, we are alining it now.

Cap Com — Roger. Okay, let me brief you a little bit before you get to Texas to do that and let me know when you need me to stop talking so you can work on your measurement.

S/C — Righto.

Cap Com — On the reentry yesterday, Wally used dual ring rate command for retro and then single ring rate command for the reentry. And he found that he had to cut in the other ring because he ran out on RCS A, he had to cut in the second ring about at the end of blackout, so we wanted to let you know about that.

We noticed that you are planning to use single ring direct on your reentry and we would like to concur in that and then if you have to use more authority, you might try reentry rate command and evenually, if you have to, of course, dual ring rate command, but we wanted to let you know that he did need both rings because he ran out on the first one.

S/C Righto. We still plan on our usual procedure of reentry.

Cap Com Roger 7.

Guaymas Guaymas has solid TM and all systems are go.

Flight Roger.

Cap Com After you make your D-4 measurement, I want to discuss this shirt sleeve environment business with you again and make sure we have the specific questions that we have left here answered, I'll wait until after your D-4 measurement.

S/C Righto.

Cap Com Gemini 7, We have Texas data now. You can do your experiment whenever you are ready.

S/C Roger, we are commencing. Experiment complete Houston.

Cap Com Roger, 7. I would like to discuss this shirt-sleeve environment evaluation with you a little further. I would like to ask specifically, in this second configuration that we had you in for a while this morning, we understood that the air was sort of stagnant on your side, Jim. But we would like to understand also whether the cabin fan being on made it okay or whether there was still some stagnation even with the fan on.

S/C It appeared to me that it was okay with the cabin fan on.

Cap Com Roger. Now, specifically, another question here. Have at anytime you had your inlet and outlet hoses in roughly the same position, same proximity, in other words, very close together for the air to come out and also go back in. We wonder if you do that would the circulation be adequate.

S/C I think we will find stagnation points along that line, if we have the inlet and outlet hoses fairly close together. I think the circulation will go just between them and we will find stagnation points.

Cap Com Okay, if you have not actually tried it, we would like you to try that for a short period because that is the present configuration in Apollo and we want to make certain about this so that we can tell them if it is necessary to change it.

S/C Roger, I'll do that ... (garble). . but it sounds like a poor design based on what we found up here.

Cap Com Roger.

S/C We've made every effort to keep them apart, the inlet and the exit, Elliot.

Cap Com Roger, that's what we understand Frank. And we want to make sure that we can definitely state this.

S/C Fine. Elliot, I'm now reading 6 percent on the attitude fuel gauge and as far as I am concerned, it is the end of the attitude fuel for the experiments.

Cap Com We had planned on a cut-off of 5 percent, Frank. Do you have some reason to keep it different from that.

S/C Well, this gauge is so nebulous that 1 and 1 percent is ..... (garble) ....

with this big thruster it takes about twice as much fuel because we can't get small enough inputs in it.

Cap Com Roger.

S/C While you all are still reading the TM, we will go ahead and maybe we can get that photo of the window measurement now.

Cap Com That's affirmative. Frank, we've been watching your fuel very closely and we would feel quite confident to let you go down to 5 percent if you are willing to. If you want to stop here, that's all right, but we feel you are quite adequate if you go on down to 5 percent.

S/C But will 5 percent be enough to aline the platform tomorrow. No body knows.

Cap Com That's affirmative.

S/C I'd like to stop right here please.

Cap Com Roger.

S/C ..... (garble)... to make some sweeps on the window.

Cap Com Roger, let me know when you are complete on that Gemini 7. I have another item to discuss with you

S/C Go ahead, Jim is doing it and tell them to me if you want to.

Cap Com I'll wait until he is finished, Frank. Just to be completly, absolutely complete on this environment evaluation when you put the hoses together you might also evaluate that with fan on and fan off.

S/C Roger. Okay, Jim is starting on the window scan now.

Cap Com Roger. Frank, for your information we show you presently have 9 pounds of MMH remaining, if you went ahead and took it down to 5 percent, you would have $7\frac{1}{2}$ pounds remaining.

S/C Roger, thank you.

S/C Elliot, are you receiving any TM on us.

END OF TAPE

/C Elliot, are you receiving any TM on us.

Cap Com That's affirmative. We can't see a specific readout on that parameter, but we are still receiving TM.

S/C Okay, Jim's repeating the Scan now.

Cap Com Roger, are you going to scan your window also Frank, or not.

S/C Negative.

Cap Com Okay.

S/C We've scanned the window twice and it is on our voice tape.

Cap Com Say again Frank .

S/C He scanned the window twice and it is on our voice tape also.

Cap Com Roger. Okay, the other item I have for you, is that we have just seen the pictures, some on the pictures which GT-6 brought back. Just a few of them have been processed so far, but they are really outstanding. You just look great sitting up there.

S/C Well thank you. Can you see our big long piece of wire we were talking about.

Cap Com Sure do. Those pictures are remarkably clear and just completely precise in every detail. We can see the D-4 instrument sticking out the sides, you can see your whole nose section, just every little detail is as clear as a bell.

S/C Roger. I hope we have some good shots of them, also.

Cap Com Roger, we watched the movie film a minute ago, the little bit that has been developed so far, we can see the scanners working and it is just tremendous film.

S/C It was a tremendous experience really.

Cap Com We understand that your pictures are on all 3 networks, live.

/C Great. And here we are in our underwear.

Cap Com Hey, I'm watching it on television now. The pictures. They

are really great, Frank.

S/C Okay. Elliot, we are going to shoot the rest of this film this afternoon and then ... (garble).

Cap Com Roger.

This is Gemini Control. You heard the pilots reaction to having been advised they were on all three networks. That was Frank Borman who said, "And here we are in our underwear." We've got some more conversation now, taped between the Rose Knot Victor and Ascension both on this same tape. Let's have it now.

RKV Gemini 7, RKV Cap Com, we have nothing for you, we are standing by.

S/C Roger, RKV.

Flight Can we have an RKV Main from you please, the first one was garbled.

RKV Roger, we will retransmit. The reserve tank is reading 296 Flight.

Flight Say again.

RKV The reserve tank, the Volkeswagen tank, is reading 296.

Flight Roger.

RKV Section 1 looks real balanced Flight.

Flight Roger that. We have your second main. It looks Okay.

RKV Roger.

Flight We would like a class 1 main, RKV.

RKV Roger. It's coming at you.

Flight Roger.

RKV I've turned out 21 Flight, all systems are go.

Flight Roger.

END OF TAPE

'light RKV, Houston. Did you send Alpha and Bravo summaries.

RKV Roger, that's affirmative Flight. Do you want a retrans?

Flight Rog.

RKV Roger. They are on the way Flight.

Flight Roger.

RKV RKV has LOS.

This is Gemini Control Houston. We are on our 194th revolution around the earth at the present time. The Coastal Sentry Quebec has just acquired out in the far west Pacific. Our orbit today, the last reading we had was a calculation based on the 192nd revolution, that was 2 revs ago. It showed an apogee of 164.1 nautical miles, a perigee of 158.2 nautical miles. This is Gemini Control Houston.

END OF TAPE

NOT AIRED

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CSQ Gemini 7, CSQ Cap Com, everything looks good here on telemetry and we are standing by.

S/7 Roger.

CSQ Flight, CSQ. The currents look pretty well balanced. We are reading 3.14 on 2 Bravo.

Flight Roger. 3.14.

CSQ CSQ has LOS Flight.

Flight Roger.

CSQ All systems were go at LOS.

Flight Roger, we copied.

END OF TAPE

Gemini Control Houston here, 310 hours and 3 minutes into the flight. Time to Retro clock shows 19 hours 4 minutes. 7 sailed over Hawaii a few minutes ago, nose up, and the conversation which includes a lot of medical data on Frank Borman went like this.

HAW TM solid Hawaii.

Flight Roger, Hawaii.

HAW Gemini 7, Hawaii Cap Com.

S/C This is 7, Hawaii.

HAW Okay, we are showing you go here on the ground. We have a valid oral temp, standing by for your blood pressure.

S/C Coming down.

HAW Roger, your cuff is full scale.

S/C Roger.

HAW We have a good blood pressure. Standing by for your exercise on you mark.

S/C MARK.

HAW Your cuff is full scale. We have a good blood pressure. Standing by for your food and water report.

S/C The Command Pilot has had a total of 1051 ounces of water, column 5 is 33, column 6 is 8. The Pilot's had a total of 890 ounces of water, column 5 is 33 and column 6 is 7. Did you copy Hawaii?

HAW Roger, we copied. Is there any change in your food report from last time.

S/C No, I think we report day 10, meal B last time.

HAW Roger, Surgeon out.

S/C Maybe we didn't, it was minus 4 egg bites for the Pilot and minus 1 egg bite for the Command Pilot.

HAW Say again the meal Gemini 7.

S/C Day 2, meal B.

HAW Thank you.

HAW How are you doing?

S/C Fine.

HAW Anything interesting?

S/C No, we are just drifting now, out of gas.

HAW 7, Hawaii.

S/C Go ahead.

HAW Jim, you better drink some more Water.

S/C Roger, I'll get some more water.

HAW You didn't see us as you went by, did you 7?

S/C Sure didn't. We are pointing straight up.

HAW Okay. Trying to get a little weather report if you did, that's all.

S/C I can give you one without looking, it's cloudy.

HAW Yeah, we are trying to squeeze a Laser pass in here if we could get this stuff out of here.

S/C We don't have any gas.

HAW Rog. Telemetry LOS at Hawaii.

END OF TAPE

Gemini Control Houston here, 311 hours and one minute into the flight and as we started this swing down across the west coast of Mexico pass that will take it over the heart of South America. Ed White came up on the line here in Mission Control Center referred to CM 3 the backup command pilot for the 7 crew and has a long chat with Frank Borman as they start this pass. And here is how the conversation is going.

HOU	California go remote
S/C	Cap Com go ahead.
HOU CAP COM	Okay, we're going to be primed for voice at your acquisition.
S/C	Roger.
HOU CAP COM	Roger that
S/C	We're almost ready almost ready to put up number 13 here.
HOU CAP COM	Very good. How's the stowage coming in there are you getting most of the miscellaneous stuff where we planned?
S/C	We can't get quite as much behind the seats but we're putting them in these bags and we're going to throw the bags on top of the seats the way we planned.

HOU CAP COM Very good, it's not so that you can't see out I guess, huh?

S/C No, we're really in pretty good shape.

HOU CAP COM It's just the way you planned it, isn't it?

S/C It's working out just the way we planned it right.

HOU CAP COM Very Good. Things down here are looking pretty good. I guess you're about at 40,000 feet now the engines shut down coming on back to home base.

S/C Right.

HOU CAP COM Very good. I've got a little message I'd like to send up.

S/C Go ahead.

HOU CAP COM EEE.

S/C Got it. Say, would you ask the flight surgeon to open....I plan on taking the cuffs off before I put my suit on for the last time, which will be tomorrow morning.

HOU SURGEON Jim, did I read you want to take the cuffs off tomorrow morning before you put the suits on?

S/C That's right, I'd like to stow them away. I don't

'/C think it will do that much good from the time I put the [illegible] suit on to the time I start .....(garble)...on reentry.

HOU SURGEON You're correct and I think that's perfectly acceptable solution. Let's do that. Incidentally I heard some comments about your water and we checked your water here Jim and the intake looks good. I think you forgot to add some you had for breakfast this morning according to the water/gun count, you missed some there. Your water intake looks very good to us right now.

S/C Very good, because when we took a drink from it and I just drank 300 ounces.

HOU SURGEON Very good.

GUAYMAS Guaymas has solid TM and all systems are go.

HOU FLIGHT Roger.

CAL California local.

HOU NET California local.

GYM S/C COM Gemini 7, Guaymas cap com, everything's looking real good here on the ground. Don't have anything special for you. If you need us, just give us a hollar.

S/C 7 Thank you, Guaymas.

HOU NET Texas go remote.

TEX S/C COM Texas remote

HOU S/C COM Gemini 7, Houston.

S/C 7 Go ahead, Houston.

HOU S/C COM We have one last chance for the MSC 4 experiment. It would occur tonight about 45 minutes into your presently scheduled sleep period. We'd like to check with you and see if it's acceptable with you to do that, pending weather. Of course, we're going to keep an eye on that and if it does have good weather we'd like to know if you are willing to do it in that period.

S/C 7 No, I don't care about the sleep period but my gauge right now is bouncing right on five and I want to align the platform with this OAMS configuration . It takes a lot of fuel plus its an almost impossible tracking task at night with this thruster. I just don't think its worth it.

HOU S/C COM O.K., very good. Glad to have that information. We'll plan accordingly.

S/C 7 Listen, Elliot, we .... putting these two hoses together and of course it depends upon the way you point them. If you point them both parellel

increase the circulation and we couldn't tell much difference really. If you point them facing eachother, well, naturally, the circulation is cut down. But I think that we ought to discuss this thoroughly when we get on the ground, probably would be the best way.

HOU S/C COM — Very good. We just wanted to make sure that you had evaluated it as fairly as it could be done in flight.

S/C 7 — Rog.

HOU S/C COM — Have one other piece of information. The GT-6 crew is at the Cape now.

S/C 7 — Roger. We thought we had someone calling from an aircraft. Have you heard anyone calling us from there?

HOU S/C COM — No, I haven't heard it.

HOU S/C COM — Gemini 7, Houston. We see a slight drop in the source pressure on the OAMS, and that's why we feel your gauge is down slightly. We feel this is a fairly normal amount of variation.

S/C 7 — Roger. You all are working on the power up procedure and everything for us now, right, Elliot?

HOU S/C COM — Rog. What we're doing is trying to get a quick lay out on that and as soon as I get it I'll

HOU CAP COM give you a rough lay out on and then we'll get in more detail as soon as we have that.

S/C Okay.

HOU CAP COM I might mention that we're all impressed with how good you guys sound today.

S/C We feel a lot better today I think that rendezvous with Tom and Wally .....(garble).

HOU CAP COM Roger.

END OF TAPE

This is Gemini Control Houston, 311 hours 35 minutes. In a pass over the Rose Knot Victor a few minutes ago, the reading from the water gun was challenged by Dr. Berry and was checked several times. The conversation goes like this.

RKV	RKV has telemetry solid.
Flight	Roger RKV.
RKV	All systems are go. Gemini 7, RKV. We copy your oral temp, you can start your blood pressure.
RKV	RKV. Your cuff is full scale.
	We transmitted TX.
Flight	Roger.
RKV	7, RKV, we had a good blood pressure. Standing by for your exercise.
S/C	Roger, MARK.
RKV	Gemini 7, RKV, your cuff is full scale.
S/C	Roger.
RKV	We have your blood pressure. Can you clarify the Command Pilots water consumption please.
S/C	Roger, wait till I get the log book.
RKV	Flight, the reserve tank is steady at 296.
S/C	Roger, we made a slight error in his calculation. His actual consumption is 1051.
RKV	1051?
S/C	Roger.
RKV	Any change in the food or water report since Hawaii.
S/C	Negative.
RKV	Roger. RKV Surgeon out.

S/C When are you going to start for home, RKV.

RKV As soon as you are on the deck, babe.

S/C ... (garbled).

RKV Our rates for babysitting are going up tonight you know. It is the weekend.

S/C Is it, I've lost track.

RKV Flight, RKV.

Flight This is AFD, go ahead.

RKV Okay, you copy that about the water report. Apparently they gave the same water report they gave Hawaii, 1051.

Flight Yeah, I copied that. I guess our surgeons don't look at his records.

RKV Rog. All systems are good. Still have both delta P lights.

Flight Rog.

RKV It looks real good, AFD.

Flight Okay, RKV, could you ask them for a total water gun count, please.

RKV Roger. Would you give us a total count on your water gun.

S/C Rog. 1674.

RKV Roger. Did you copy AFD.

Flight Rog.

S/C You can tell Houston that we don't have any .... (garbled) delta P lights anymore, ... (garble) and we've got them turned out.

RKV	Roger, we got that. You must have slept good last night.
S/C	Yeah, we did sleep good. ..... (garble) .....
RKV	Say again.
S/C	I said we got the .... (garble) .....
RKV	I'm not reading you to good. Say again.
S/C	I said I ... (garble) .... from Cocoa.
Flight	RKV procedures.
RKV	We'll be practicing.
RKV	Go ahead procedures.
Flight	Send us a Bravo summary.
RKV	Roger. RKV has LOS, all systems go
FLight	Roger.

END OF TAPE

This is Gemini Control, Houston. 312 hours and 13 minutes into the flight. In a conversation with the Coastal Sentry Quebec, it's apparent that Frank Borman doesn't want to be counted out as a flight controller on future missions. He volunteers to work in Australia, or even the Coastal Sentry Quebec. The conversation goes like this.

CSQ — Gemini 7, CSQ Cap Com. You look good from here. We have nothing for you this pass. Standing by.

S/C 7 — Could you...Would you ask the Surgeon there. We want to stow everything tonight; might as well stow that exerciser. With the landing in the morning, I don't think they'll need it, more than likely.

CSQ — I'll check. Stand by.

HOUSTON — Tell him that's okay. We'll give him a report on that later. We don't have a Surgeon in here at the moment. But, Dr. Kraft says it's okay.

CSQ — Dr. Kraft says okay to stow. Gemini 7, CSQ. It's okay to go ahead and stow the exerciser.

S/C 7 — Thank you. We'll stow her tonight.

CSQ — That's straight from Dr. Kraft.

S/C 7 — Oh! Sure! Thank you. How's the water now, CSQ?

CSQ — It's not as bad as it was yesterday. It's still a little rough.

S/C 7 — The sea's giving you a tough day down there, huh?

CSQ — It seems like it this time.

S/C 7 — Have you been there before?

CSQ — This is my fifth trip to the CSQ.

S/C 7 — How lucky can you get.

CSQ — I have bell-bottoms on all my trousers now.

S/C Why don't you tell Dr. Kraft he should rotate that desirable assignment. Everybody should get the CSQ.

CSQ Roger. We'll see to that.

HOUSTON Tell him we're going to send Frank there the next trip.

CSQ Chris just said he's going to send Frank there next trip.

S/C That's fine; but if they need anybody to go to Australia, I volunteer.

CSQ Join the crowd. I'd like to pass up congratulations from the Flight Controllers on the network for the beautiful job you both are doing.

S/C Ditto up here. We really appreciate all your help. You really keep our moral up.

CSQ All systems still go, Flight.

HOUSTON Roger.

CSQ We've had LOS, Flight.

HOUSTON Roger that.

END OF TAPE

This is Gemini Control Houston on the 195th revolution of this 206 revolution flight. Here is the conversation with the Hawaii station.

HAW Gemini 7, Hawaii Cap Com

S/C Go ahead Hawaii, Gemini 7.

HAW Roger, we show you go on the ground and I would like to get this flight plan report if I could.

S/C Okay, the only thing that we have to report today is that we have no more film left. It has all been expended and the only two experiments -- three experiments we were able to accomplish because of fuel or weather was the S-5 over North Africa, the D-4/D-7 calibration on the sun and twice we did the S-8/D-13 calibration of the window.

HAW Roger. I have some information here for you. Yesterday on the retrofire of Gemini 6, the crew had a delay between 1 and 2 retro, and between 2 and 3. They then depressed the manual. We suggest that you use the normal procedure and depress manual one second after your retro.

S/C Roger.

HAW Okay, and I have a PLA update for you if you are ready to copy.

S/C Stand by one. Okay.

HAW Okay, the RET 400K for all areas is 21+20, weather in all areas is good. Area 199-B, 318 18 10, 200-D, 319 00 15, 201-D, 320 35 24, 202-D, 322 11 59, 203-2 323 42 30, 204-1, 325 12 11, 205-1, 326 47 58, 06-1, 328 23 25.

S/C Roger, we copied them all.

HAW Roger. I have also some more information for you, the cyros for bedtime.

S/C Go ahead.

HAW ECS 02 heater off, fuel cell 02 heater auto, fuel cell H2 heater auto.

S/C Roger.

HAW Fuel cell purge over the RKV.

S/C Thank you.

HAW We have nothing else for you at this time 7, we will be standing by.

S/C Thank you.

HAW Hawaii has TM LOS.

END OF TAPE

This is Gemini Control, Houston. 313 hours, 4 minutes into the flight of 7. And, as we approach the end of this mission, recovery considerations become a bigger and bigger item of conversation as they were over the Rose Knot Victor a few minutes ago. Here's how it went.

RKV RKV has telemetry solid. All systems are go, Flight. We still have both Delta P lights.

HOUSTON Roger. Both Delta P lights.

RKV Gemini 7, RKV Cap Com.

S/C Seven here.

RKV Roger. We're ready for your purge whenever you are.

S/C Roger. Purging Section One now.

RKV Roger.

HOUSTON RKV, Houston Flight.

RKV Go ahead, Flight.

HOUSTON Ask Frank how much problem for him it is for him to keep the exerciser out and stow it tomorrow morning.

RKV Okay. Houston's working on a time line for your activities tomorrow and they'll give you....Gemini 7, RKV.

S/C Go ahead.

RKV Houston's working on a time line for tomorrow's activities; and they're going to give you a general briefing on it over Tananarive this rev.

S/C Okay. Fine. Sounds good.

RKV And, Chris would like to know how much trouble it would be for you if you kept the exerciser out and stowed it tomorrow.

S/C Well, it's way in the back of our gear. We had .....(Garble)... However, we can probably stow it for re-entry someplace else besides the cockpit.

RKV Okay.

HOUSTON Tell him that's what the Surgeons would like if they can do it.

RKV The Surgeons would like for you to leave it out if you could.

S/C Right. The medics have the last word.

RKV Roge. Purge done on 1, Flight. Purging Section Two, now, Flight.

HOUSTON Would you send us an Alpha and Bravo summary.

RKV Roger.

S/C Purge complete, RKV.

RKV Roger. Purge is complete, Flight. We still have both Delta P lights.

HOUSTON Roger.

RKV All systems look good, Flight.

HOUSTON Roger.

RKV 3W tank is steady at 296. Flight, you get our main after the purge?

HOUSTON Negative.

RKV RKV has LOS. All systems go.

HOUSTON Roger, RKV.

END OF TAPE

This is Gemini Control at 313 hours and 34 minutes into the mission of Gemini 7. Here in the Control Center we are in the midst of our shift break. The White Team of Flight Controllers moving into the consoles for the last time this mission. Our flight crew is in a sleep period. We do not have any indication that they are asleep, in fact, our indication at this time from the Rose Knot, the ground data from the Rose Knot shows that the crew is active. However, voice communication has been ruled out now and we will not communicate with the crew unless there should be an emergency which is extremely unlikely at this time. The crew with this night's sleep will be on the home stretch and when they awaken we will get ready to come home. This is Gemini Control, 313 hours and 35 minutes into the mission. We do have a tape to play back for you at this time. It is the last voice communication made with the crew of Gemini 7 as they passed over Tananarive, and at this time we will play that tape.

TAN Tananarive has acquisition.

Cap Com Gemini 7, Gemini 7. Houston. How do you read.

S/C This is 7. Loud and clear.

Cap Com Roger, Jim. I have some additional information for you when you are ready to copy.

S/C Ready to copy Elliot.

Cap Com Okay. Modify onboard flight plan to reflect the following: power up and alinement checklist, elapsed time 327 35, that should be about TR-223. We will refine these times in the morning. This is 25 minutes prior to Carnarvon on rev 205. Do you copy so far.

S/C Roger.

Cap Com Before platform cage, add the following. Squib battery no. 3 on. Bus tie switches 1 and 2 off. Squib batteries 1 and 2 on. Main batteries 4 on. Primary pump B off. Primary pump A on. Secondary B off. Secondary A on. Do you copy so far?

S/C Roger.

Cap Com After platform cage, BEF, discontinue checklist -- discontinue checklist until Carnarvon. Time on that is 328 00 and that is about TR-158. 158. Then resume checklist at Carnarvon. At the end of rev 205, that is a time of 328 44, we will give you a TR update and a preretro command load for 207-1. And that will be at TR-1+14. Copy so far.

S/C Roger.

Cap Com Delete C-reentry continuous from the normal place in the preretro checklist. After the first fuel cell purge tomorrow C-reentry continuous, MSC-2 and 3 off. Do you copy.

S/C Roger.

Cap Com That's all we have now and we will continue to work on this tonight and refine it in the morning if there are any changes in this and we will give you exact times on everything.

S/C Roger.

Cap Com Very good. See you in the morning.

S/C Roger, Elliot.

Tananarive Tananarive has LOS.

END OF TAPE

This is Gemini Control. Gemini 7 is now in its 196th revolution. Passing over the Pacific; and we have had one final voice conversation with the crew over the Coastal Sentry Tracking Ship just a few minutes ago; and we will play back this last voice tape.

CSQ Gemini 7, CSQ.

S/C Go ahead CSQ, Gemini 7.

CSQ Roger. Could you put your bio-med recorder #2 on continuous, please.

S/C Recorder's on.

CSQ Roger. Thank you. We have you go on the ground, Gemini 7. We're standing by.

S/C I do have one question on the update that I received. ...(Garble)..

CSQ Gemini 7. I do not copy. Please repeat.

S/C Roge. Do you read me now?

CSQ Roger.

S/C I don't understand one thing here that I just received from Houston. Delete the re-entry continuous from normal place after first fuel purge. C-Band re-entry continuous, and MSC 2 and 3 off. Oh, I guess that means after first fuel purge do that.

CSQ Alright, stand by. Flight, you got that?

HOUSTON Yea. I think what he's talking about is re-entry C-Band beacon. Stand by. As soon as he wakes up, we want the re-entry C-Band in continuous.

CSQ Roger. Copy. Gemini 7. As soon as you wake up, they want the re-entry C-Band in continuous. Do you copy?

S/C As soon as we wake up...(Garble)...

CSQ Say again, Gemini 7. I cannot copy.

S/C Roger. As soon as we wake up put the C-Band re-entry to continuous.

CSQ That's affirmative.